

THE AMPHIPODA OF SOUTHERN AFRICA

PART 5

THE GAMMARIDEA AND CAPRELLIDEA OF THE CAPE PROVINCE WEST OF CAPE AGULHAS

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(With 21 figures)

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ABSTRACT

A systematic account of the marine gammaridean and caprellid Amphipoda of the Cape Province of South Africa west of Cape Agulhas (20°E) is provided. The analysis is based on collections totalling over 70 000 specimens in the possession of the University of Cape Town and of the South African Museum, as well as records from the existing literature.

Two hundred and thirty-two species are recognized from the area. These include fourteen species which are recorded for the first time from southern Africa, as well as the following eleven species which are described as new to science: *Panoploea stegosaura*, *Maera emarginata*, *Maera komma*, *Maera thrixa*, *Melita mucronata*, *Listriella saldanha*, *Socarnes septimus*, *Periocolodes pallidus*, *Heterophoxus cephalodens*, *Heterophoxus opus* and *Podocerus pyuraa*.

In addition the following changes in taxonomy are proposed:

A new family—the Temnophliidae—is erected for *Temnophlias* K. H. Barnard, 1940. *Ceradocus aviceps* K. H. Barnard, 1940 is removed to *Quadrivisio*. *Tryphosella africana* K. H. Barnard, 1955 is synonymized with *Hippomedon longimanus*. *Tryphosella normalis* K. H. Barnard, 1955 is removed to *Hippomedon* and *H. rotundipleura* Ledoyer, 1973 synonymized with it. *Microlysias indica* K. H. Barnard, 1937 is synonymized with *M. xenoceras*. *Uristes induratus* K. H. Barnard, 1925, is removed to *Procyphocaris* where *P. primata* J. L. Barnard, 1961 falls into synonymy with it. *Podocerus cristatus* of K. H. Barnard (1916) and Griffiths (1973, 1974a, c) is referred to *P. inconspicuus*. *Allorchestes inquirendus* is synonymized with *Hyale grandicornis*, *Talorchestia inaequalipes* with *Orchestia gammarella* and *Caprella falsa* with *C. penantis*.

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INTRODUCTION

The following account forms the fifth and last part of a series surveying the known gammaridean and caprellid Amphipoda of various geographical zones within southern Africa (defined as Africa south of 20°S). Previous sections

have dealt with Moçambique (Griffiths 1973), South West Africa (Griffiths 1974*a*), Natal (Griffiths 1974*b*) and the Cape Province east of Cape Agulhas (Griffiths 1974*c*), while the present portion deals with the remaining area between Cape Agulhas and the South West African border.

Oceanographic conditions along the Atlantic coast from Cape Point to South West Africa are primarily influenced by the Benguela Current. The cold waters of this current originate in the sub-antarctic, but before reaching the African coast they have been covered by a thick layer of warmer, less dense South Atlantic water, 200–500 m thick. However, along the coastal margin the dominant south or south-easterly winds of summer frequently blow the warm oceanic water offshore, allowing cold Benguela water to upwell to the surface. Thus although surface temperatures a few kilometres offshore average 15–17°C the narrow band of inshore upwelled water may be as cold as 8°C (normally 10–14°C). As wind stress varies so the width of the upwelled zone waxes and wanes, indeed during periods of north-westerly winds the warmer Atlantic water extends to the shoreline.

Conditions in the area between Cape Agulhas and Cape Point are even more variable than those experienced along the west coast, since warm Agulhas Current and cold Benguela Current waters mix in this region. The limits of the warm and cold waters are controlled largely by wind conditions and are consequently highly variable. During periods of south-easterly winds, particularly in summer, warm Agulhas water may extend into False Bay, and as an offshore tongue of water, right around Cape Point. Where this water reaches the shore the temperature may rise above 20°C, but this rise is not universal since local upwelling cells are produced along the west coasts of projecting shore features, creating much colder conditions. Conversely north-westerly winds of winter force warmer surface waters offshore and allow cold Benguela water to round Cape Point and upwell along the east coasts of peninsulas. As a result of this upwelling system the fauna of peninsulas along this stretch of coast tends to contain more cold-water forms while in sheltered bays more warm-water forms are to be found.

These unusual physical conditions and the proximity to the marine research centres of Cape Town have combined to attract a great deal of research effort to the south-western Cape coast. The marine benthos of the area has been extensively sampled, with the exception of the region north of Lambert's Bay, which remains virtually untouched. The University of Cape Town alone has collected more than 2 000 benthic samples between Lambert's Bay and Cape Agulhas, particular attention having been given to the Saldanha Bay complex and to False Bay, each of which accounts for over 500 samples. In addition, other South African institutions and international expeditions have made smaller benthic collections in the area. Extensive intertidal collections also exist, notably those of K. H. Barnard (presently housed at the South African Museum) and of the University of Cape Town. These collections largely originate from the Cape Peninsula but include samples from numerous localities

between Cape Agulhas and Port Nolloth. Compared with the Indian Ocean coast, the Atlantic coast of the Cape Province is poor in estuaries but those which do exist have been comparatively well studied, allowing fruitful comparison with the more numerous estuaries of other regions.

THE COLLECTING STATIONS

The scope of the collections from the area considered here is so great that it has become impracticable to list individual stations, as has been the format in previous parts of this series. Instead a generalized discussion of the various collecting areas is given and the distributions of individual species are provided in the more compact form outlined in the systematic section.

Collections from estuaries

(a) *Klein River Estuary, Hermanus*

A full description of the Klein River Estuary and of its fauna is provided by Scott, Harrison & Macnae (1952). The estuary extends from Walker Bay for a distance of about 12 km to the village of Stanford. Initially the river is canal-like before opening up into a shallow lagoon about 0,75 km wide. The lagoon consists mostly of muddy shallows through which deeper channels meander, but near the mouth the bottom becomes sandy with rocky outcrops along the shore. The lagoon is closed for most of the year but during the winter rains it fills steadily until a passage is artificially cut through the sandbar at the mouth to prevent flooding. The mouth remains open during the spring, when the lagoon is tidal, and then gradually closes, remaining so until the next year's rains.

On sandy shores around the lagoon numerous *Talorchestia australis* are to be found, whereas this species is replaced by *Orchestia ancheidos* under stones and in gravel areas. Amongst the weeds of the lagoon *Melita zeylanica* is abundant, as is *Corophium triaenonyx*. The tubicolous *Grandidierella lutosa*, a species found only in this vicinity, is common on the mudflats, although *Corophium triaenonyx* is present here too. *Orchestia rectipalma* occurs under stones on gravel bottoms as well as amongst weeds. In the upper reaches of the estuary *Quadrivisia aviceps* has its only known habitat.

(b) *Milnerton River system*

This system, which consists of a river, the Diep River, which flows into a shallow lake, Riet Vlei, and from there through the Milnerton Estuary to the sea, has been fully described by Millard & Scott (1954). At the time of this study the system was relatively undisturbed, but Riet Vlei is at present being developed into a marina. In its original state the system experienced a consistent fresh-water flow during winter, but in summer a sandbar closed the mouth while Diep River and Riet Vlei dried out, causing the estuary to become hypersaline.

Under these rigorous conditions of fluctuating salinity the fauna of the

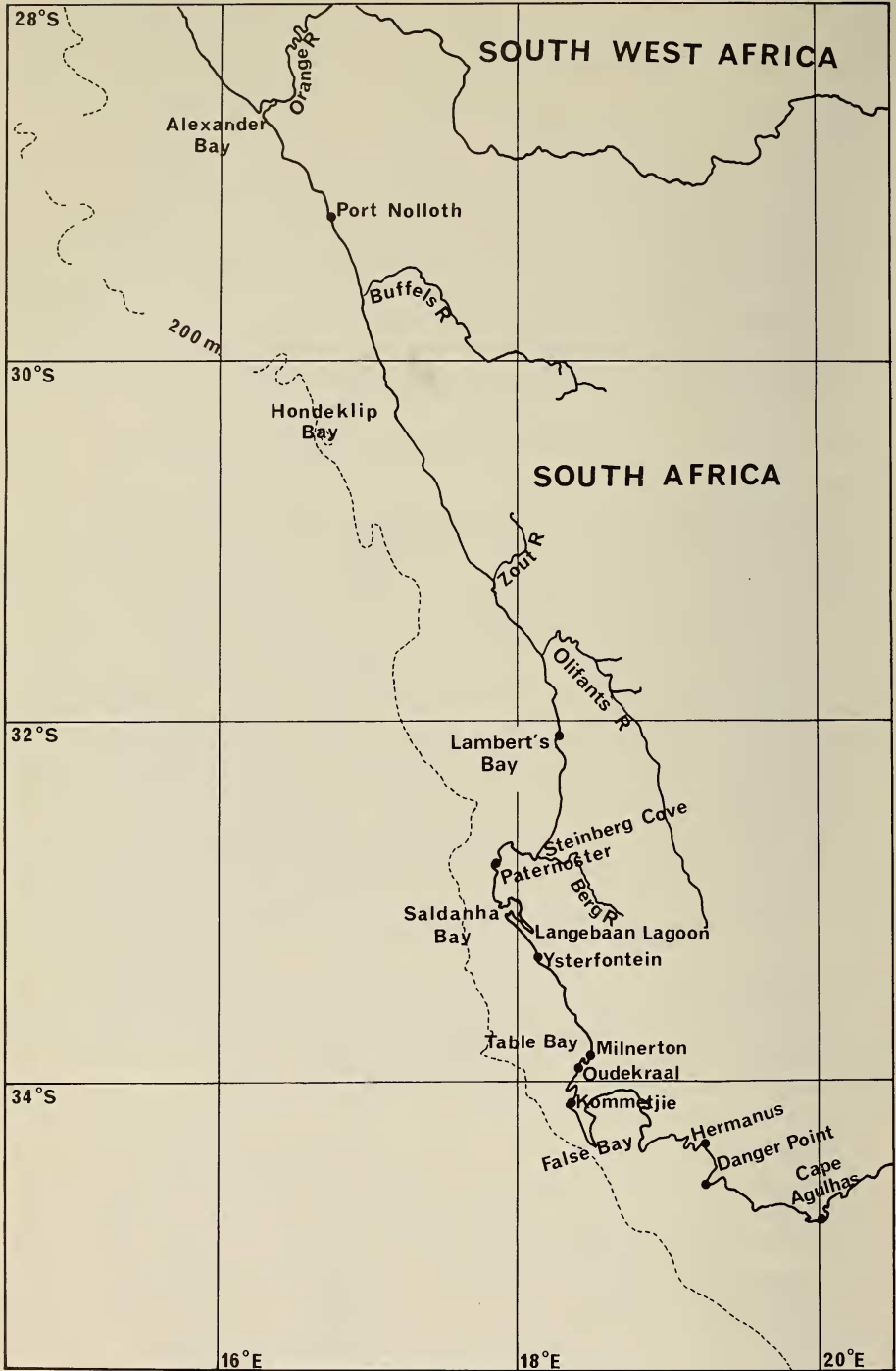


Fig. 1. The Atlantic coast of the Cape Province showing main collecting areas.

system was relatively impoverished. The amphipod fauna consisted of only two species, *Afrochiltonia capensis* and *Melita zeylanica*. Both these well-known euryhaline forms were found amongst weeds and polychaete tubes in the lower reaches of the estuary, where they were most abundant in early summer.

(c) *Berg River Estuary*

The Berg River Estuary was the subject of a brief collecting expedition by the University of Cape Town in September 1949. The estuary is about 60 m wide and 6 km long with a maximum depth of about 10 m, and enters the sea at the head of St Helena Bay. *Talorchestia quadrispinosa* is common on the sandbanks around the mouth, while the waters of the estuary harbour the typical estuarine species *Afrochiltonia capensis*, *Melita zeylanica*, *Orchestia rectipalma* and *Orchestia ancheidos*.

(d) *Olifants River Estuary*

The Olifants River Estuary consists of a fairly straight stretch of water about 200 m wide and 2–5 m deep flowing through a deep valley surrounded by arid scrubland. The flood plain consists of a muddy saltmarsh partially cut off by a shallow blind arm which represents a previous river mouth. The present mouth is fringed by sandbanks to the south, while the north bank is rocky. The river bed is mostly soft mud which becomes progressively more sandy towards the mouth.

Eight amphipod species have been collected from the estuary. Five of these are typical marine forms and were found only around the mouth, while the remaining three species were common further upstream. These euryhaline species are *Afrochiltonia capensis*, *Melita zeylanica* and *Orchestia rectipalma*.

Collections from the marine environment

(a) *Shore collections*

During early studies by the University of Cape Town on the constitution of the rocky intertidal fauna around the South African coast, collections were made at a number of west coast localities. These stations were more or less evenly spaced between Cape Agulhas and Buffels River, there being eleven stations between these two points. More recently numerous other shore collections have been made, particularly around the Cape Peninsula.

Sandy beaches in these areas may harbour enormous populations of either *Talorchestia quadrispinosa* or *Talorchestia capensis* along the drift line and above, while at lower levels *Bathyporeia* sp. and *Urothoe elegans* are to be found burrowing in the sand. The fauna of rocky areas is considerably more complex but is dominated by *Hyale* spp., principally *H. grandicornis* and *H. saldanha*. At lower levels *Ceradocus rubromaculatus* and *Lysianassa ceratina* are common under rocks, while *Aora kergueleni*, *Amaryllis macrophthalma*, *Paramoera*

capensis and *Caprella* spp. occur in great numbers amongst algae and bryozoa. The unusual *Temnophlias capensis* is to be found crawling over rock surfaces while many other species are locally abundant.

(b) *Langebaan Lagoon*

A full description of Langebaan Lagoon and of its fauna is given by Day (1959). The lagoon is about 3 km wide and extends for about 15 km south of its origin on the southern shore of Saldanha Bay. The whole area is completely protected from the sea by a narrow finger of land projecting parallel to the shore and by two small islands at the mouth of the lagoon. Tidal flow is considerably restricted and retarded, particularly at the head of the lagoon. The water is generally clear and the bottom mainly sand. The consistency of the sand varies greatly, being fine and clean at the mouth of the lagoon, whereas in the body of the lagoon the beach slopes fairly steeply to mean sea-level and then flattens out into a wide, waterlogged bed of fine, often muddy sand. These sandflats are riddled with *Callianassa* holes and abound in patches of the loose alga *Gracilaria* and of *Zostera*. At the high-water mark saltmarsh vegetation occurs, this zone becoming extremely wide at the head of the lagoon. Salinity in the lagoon is generally as high or slightly higher than experienced in the open sea, while solar radiation also tends to raise the temperature somewhat.

The amphipod fauna of Langebaan Lagoon is rich and varied, some 65 species having been recorded there. The rocky islands at the mouth of the lagoon and isolated rocky patches elsewhere support large populations of *Elasmopus affinis*, *Paramoera capensis*, *Cymadusa filosa* and *Hyale* and *Caprella* spp. living amongst the rich algal cover. *Ceradocus rubromaculatus* is common under rocks, while *Polycheria atolli* is frequently recovered from sponges and compound ascidians. Along the beaches *Talorchestia* spp. are fairly common at the driftline, while the rich fauna of the *Zostera* and *Gracilaria* beds is dominated by *Cymadusa filosa* and *Lysianassa ceratina*. At lower tidal levels the mudflats are inhabited by the tubicolous *Ampelisca palmata* and burrowing *Urothoe* spp. as well as *Lysianassa ceratina*. *Bathyporeia* sp. becomes common at lower water springs. The sand-bottomed channels which cut through the sandflats yield a variety of species of which *Lysianassa ceratina* and *Paramoera capensis* are the most abundant. Both these species, as well as *Ampelisca palmata* and *Perioculodes longimanus*, also occur in the plankton at night.

(c) *Saldanha Bay*

Lying about 120 km north of Cape Town, Saldanha Bay consists of an almost semicircular bay about 8 km across, from the southern end of which stretches Langebaan Lagoon (above). The main bay is moderately protected from wave action by rocky headlands, between which lie three small islands. The eastern shore of the bay is formed of a long sandy beach interrupted by a few isolated rocky points. The bottom of the bay consists almost entirely of sands of various textures, these tending to be coarse and shelly in areas of

turbulence, particularly around the islands, and finer elsewhere. Extensive harbour development is at present taking place in the area and this can be expected to result in major changes in the physical conditions and fauna in the bay.

The fauna of Saldanha Bay has been extensively sampled and 72 amphipod species have been recorded there. Along the driftline of sandy beaches *Talorchestia australis* is common, while rocky points along the shore are populated by numerous *Ceradocus rubromaculatus*, *Aora kergueleni*, and *Hyale* spp. *Caprella* spp. are also common on algae and hydroids and *Polycheria atollis* is frequently found burrowing into compound ascidians and sponges. Amongst the benthos of the bay *Lysianassa ceratina* and *Paramoera capensis* are the most frequently encountered species, while *Ampelisca anomala* dominates areas of shelly sand. Where the sand is fine and clean *Ampelisca brevicornis* is abundant with a number of other species also common, particularly *Urothoe grimaldi*, *Orchomene plicata*, *Bathyporeia* sp., *Perioculodes longimanus* and *Megaluropus namaquaeensis*. Local concentrations of *Photis* spp. and of *Siphonoecetes dellavallei* are associated with solid objects on the bottom.

(d) False Bay

A description of False Bay and its biology is given by Day (1970). The bay is roughly square with a side of some 35 km. Its eastern and western shores are generally precipitous, although sandy beaches do occur along the Cape Peninsula to the west, notably Simonstown and Fish Hoek. The northern shore of the bay is flat and low-lying, forming wide sandy beaches from which the bottom shelves gently towards the mouth, where it reaches a maximum depth of about 90 m. The substrate of the bay consists largely of sand; this may be fine and clean, or coarse and mixed with shell in the shallower areas, but over most of the bay it is fine and khaki-coloured, merging into green mud in deeper water near the mouth. Numerous rocky patches are to be found throughout but are particularly numerous to the east.

Hydrological conditions in the area are of particular interest since the bay is subject to both Atlantic and Indian Ocean regimes. Under the influence of north-westerly winds in winter, surface water is blown south and cold Benguela water enters the bay around Cape Point, causing the temperature to drop to 13–14°C at the surface and as low as 10°C in the deeper parts. With the spring south-easterly winds Agulhas water drifts into the bay, striking the western shore and drifting clockwise from there. At this stage surface temperatures average 17–18°C but may rise to 20°C by the end of summer when blue Agulhas water dominates the bay. At this stage a distinct thermocline is usually found at about 20 m.

As a result of its unusual hydrological regime and its proximity to Cape Town, False Bay has been the subject of a good deal of research. The Zoology Department of the University of Cape Town has collected some 500 benthic and numerous intertidal samples from the bay and recorded over 140 amphipod species from these.

The amphipod fauna of False Bay is both rich and complex, the species composition varying widely with depth and substrate composition. The clean sands of the surf zone are dominated by burrowing forms, particularly *Periocolodes longimanus* and *Urothoe grimaldi* in the shallower areas, and *Urothoe pulchella* and *Mandibulophoxus stimpsoni* slightly deeper. The fine hard-packed sands beyond the surf zone are predominantly occupied by tubicolous filter-feeders, notably *Ampelisca anomala*, *A. palmata* and *A. brevicornis*, although both *Photis uncinata* and *Aora gibbula* are locally common. The deepest areas of the bay are composed of green muds and here *Hippomedon normalis*, a scavenging species, is the most common amphipod, although *Ampelisca brevicornis* also extends into this zone.

The fauna of rocky areas is very diverse with numerous *Amaryllis macrophthalma*. Other lysianassids such as *Lysianassa variegata* and *Orchomene plicata* are also common. *Ampithoe ramondi* is well represented, as are *Caprella* spp. *Paramoera capensis* is the most common species in the bay and is found both in rocky and sandy areas as well as at night in the plankton.

(e) *Lambert's Bay*

The University of Cape Town has recently undertaken a study of benthic distribution in the Lambert's Bay area. Sampling has taken the form of a transect running from high-water springs to a depth of 800 m. The substrate from 0 to 60 m consists of fine or medium well-sorted sands, while between 80 and 100 m there is an area of muddy sand characterized by the presence of the large tubicolous polychaete, *Diopatra monroi*. Below this zone lies a further area of fine silty sand which extends to the limit of the transect line at 800 m.

The amphipod fauna can be considered as falling into a number of faunistic zones. The first of these is the driftline fauna, the only amphipod represented here being *Talorchestia quadrispinosa*. The lower intertidal levels and surf zone (to 5 m depth) are characterized by a dominance of burrowing forms such as *Periocolodes longimanus*, *Bathyporeia* sp., *Urothoe grimaldi* and especially the deep-burrowing *Cunicus profundus*. The area between 5 and 40 m has a rich amphipod fauna with *Paramoera capensis* the most common species. Burrowing forms, particularly *Bathyporeia* sp. and *Periocolodes longimanus*, are still common, while tubicolous forms, notably *Ampelisca brachyceras* and *Photis longidactylus*, become important. *Cunicus profundus* is replaced by other haustoriids, notably *Urothoe grimaldi* and *Urothoe pulchella*. The muddy sands of the *Diopatra* zone between 80 and 100 m have a similar fauna, particularly abundant in *Paramoera capensis*, *Megaluropus namaquaeensis* and *Bathyporeia* sp., however *Ampelisca brachyceras* is replaced by *Ampelisca anomala*. *Ampelisca anomala* continues as the dominant ampeliscid to 120 m, where it is replaced by the larger *A. brevicornis*. Stations deeper than 120 m are also marked by the appearance of such deep-water forms as *Paraphoxus oculatus*, *Eriopisella capensis* and *Hippomedon onconotus*.

(f) *Other benthic samples*

In addition to the discrete collections discussed above numerous other collections exist, particularly in the possession of the University of Cape Town. These include material originating from commercial trawlers; donated by the Division of Sea Fisheries and collected by the university's research vessels R.V. *Gilchrist* and *Thomas B. Davie*. The area covered is primarily that between Cape Point and Lambert's Bay. Very few of the samples are from further north or from depths of more than 200 m and many species undoubtedly await discovery in these regions.

Since the collections were not planned with any predefined concepts of faunistic analysis in mind, their interpretation is complicated by the interaction of variables of location, season, depth, substrate and collecting gear. Although over 100 species are represented, some are notable in their scarcity. For example, *Mandibulophoxus stimpsoni*, so abundant in False Bay and eastward, is rare along the west coast, as is *Photis uncinata*, which is replaced by the similar *P. longidactylus*. Sandy and muddy areas are normally dominated by burrowers (*Perioculodes*, *Urothoe*, *Bathyporeia*) and tubicolous forms (*Byblis*, *Photis* and especially *Ampelisca*), although *Paramoera*, *Lysianassa* and *Hippomedon* are also common. Relatively few samples originate from rocky areas, but these include numerous *Lysianassa*, *Paramoera*, *Chevalia*, *Maera* and *Leucothoe* as well as various caprellids.

SYSTEMATICS

The taxonomy of Gammaridea follows the system outlined by J. L. Barnard (1969) and subsequently revised by J. L. Barnard (1970*a*, 1972*b*, 1973). The revision of the family Gammaridae proposed by Bousfield (1973) is still contentious (Holsinger 1974) and has thus been disregarded here. Familial taxa within the Caprellidea are those proposed by McCain (1970).

The system of listing individual records for each species, as employed in earlier portions of this series, has proved too cumbersome to encompass the 2 000 stations and 70 000 specimens reported on here. A more concise system has thus been devised in which the ranges of species are indicated by the latitude/longitude squares in which they have been recorded. These are followed by letters denoting the depth of the various records (E = estuarine, I = intertidal, T = 0–29 m, O = 30–99 m, D = 100–499 m, VD = 500–1 000 m). The latitude/longitude square 34°S/18°E includes both the cold Atlantic and warmer False Bay coasts of the Cape Peninsula, and in order to distinguish between these the letters FB are appended to records from False Bay. Thus a range indicated as 32/18/I, S to 34/18/FB/I, T indicates that the species in question is found intertidally and at depths of less than 30 m between 32°S/18°E and 34°S/18°E (False Bay).

In the account which follows the arrangement of families, genera and species is alphabetic. Limbs of the pereon are referred to as gnathopods 1 and 2,

followed by pereopods 1–5 and the segments of these limbs are referred to as articles 1–7, article 1 being the coxal plate (whether this is present or absent). The analysis is restricted to species occurring between the driftline and 1 000 m depth, with estuarine species being included. Holotypes of all new species and representative material of all other species have been placed in the South African Museum, Cape Town.

Suborder GAMMARIDEA

Family Acanthonotozomatidae

Iphimedia capicola K. H. Barnard, 1932

Iphimedia capicola K. H. Barnard, 1932: 118, fig. 66.

Records: 34/18/FB/T, O to 32/18/T, O, moderately common.

Distribution: Endemic, Port Elizabeth to Lambert's Bay.

Panoploea excisa K. H. Barnard, 1932

Panoploea excisa K. H. Barnard, 1932: 129, fig. 73.

Records: 33/17/T, a single record.

Diagnosis: Rostrum acute, not strongly deflexed; pereon segments 1–6 smooth, 7 with a small pair of dorsal denticles; pleon segments 1–3 each with a pair of dorsolateral procumbent teeth; gnathopod 1 chelate, gnathopod 2 subchelate; article 2 of pereopod 5 posteriorly serrate, postero-distally excised to leave a large semicircular concavity; telson oblong, apically truncated, slightly emarginate.

Distribution: Endemic, the above record is the only one to date.

Panoploea stegosaura sp. nov.

Fig. 2

Description of male (4 mm): Head slightly shorter than enlarged pereon segment 1, rostrum downturned, extending to tip of article 1 of antenna 1, eyes round, rust brown; articles 1 and 2 of antenna 1 medio-distally produced into an acute tooth, article 3 slender (flagellum broken), accessory flagellum absent; flagellum of antenna 2 broken; upper lip slightly incised apically; mandible without molar, consisting simply of a subacute process, palp 3-articulate (Fig. 2B); lower lip (Fig. 2C) with inner lobes, their apices obscurely incised; palp of maxilla 1 (Fig. 2D) bi-articulate, not extending to apex of outer plate, outer plate bearing 14 strong serrate spines, inner plate with two short apical setae; plates of maxilla 2 subequal; palp of maxilliped (Fig. 2E) 3-articulate, article 2 medially produced to apex of article 3, both articles terminally setose,

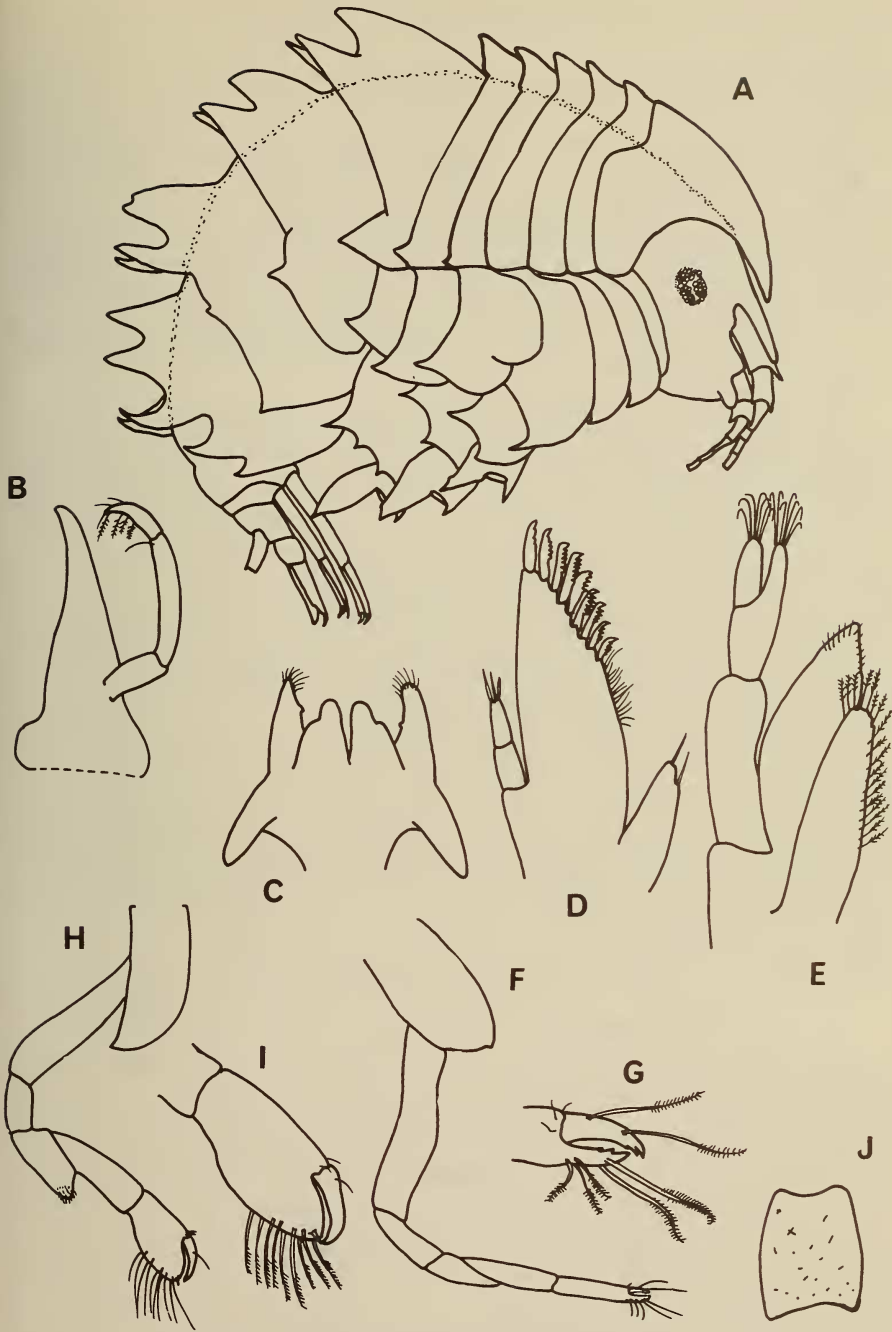


Fig. 2. *Panoploea stegosaura* sp. nov.

Male, 4 mm: A—lateral aspect; B—mandible; C—lower lip; D—maxilla 1; E—maxilliped; F—gnathopod 1; G—tip of gnathopod 1 enlarged; H—gnathopod 2; I—articles 6 and 7 of gnathopod 2 enlarged; J—telson.

outer plate bearing short marginal setae, inner plate with 18 short marginal plumose setae.

Pereon segments all medio-dorsally keeled, 1 produced anteriorly over head, 7 with a posterior pair of sub-dorsal teeth; anterior coxae acuminate, 4 posteriorly excavate, 5-7 posterodistally produced into acute teeth; gnathopod 1 minutely chelate (Fig. 2F-G), articles 5 and 6 subequal, 6 and 7 distally bearing a few long plumose setae; gnathopod 2 weakly chelate (Fig. 2H-I), palm defined by a small spine, posterior margin with a row of pectinate setae; pereopods 1 and 2 slender, article 4 antero-distally lobed (articles 5-7 missing); posterior margin of article 2 of pereopods 3 and 4 with a strong medial tooth, pereopod 5 with four teeth on posterior margin of article 2; article 4 of pereopods 3-5 slightly produced antero-distally, strongly lobed postero-distally (articles 5-7 missing).

Pleon segments 1 and 2 each with an anterior medio-dorsal tooth and a posterior pair of upright sub-dorsal processes; pleon segment 3 with two triangular medio-dorsal teeth and a pair of reverted sub-dorsal processes posteriorly; first pleonal epimeron postero-distally rounded but with an acute process at centre of posterior margin, second pleonal epimeron similar but postero-distally acute; third pleonal epimeron with stronger posterior and postero-distal teeth; uropods 1 and 3 extending equally, slightly exceeding apex of uropod 2, rami lanceolate, outer ramus of uropods 2 and 3 slightly the longer; telson apically truncated, broadly excavate (Fig. 2J).

Holotype: SAM-A13228, male, 4 mm, unique.

Type-locality: 34°14'S/18°29'E, 15 February 1965, depth 40 m, substrate coarse khaki sand.

Relationships: The highly developed dorsal armature of this species and the unusual manner in which pereon segment 1 is produced anteriorly over the head distinguish it from other members of the genus, none of which show carinae on all pereon segments.

Family Ampeliscidae

Ampelisca acris Griffiths, 1974

Ampelisca excavata (non K. H. Barnard, 1925): K. H. Barnard, 1955: 82, fig. 40A.

Ampelisca acris Griffiths, 1974c: 268, fig. 3.

Records: 34/18/FB/T, O, 34/18/O, a few records.

Distribution: Endemic, Port Elizabeth to Cape Peninsula.

Ampelisca anisuropa (Stebbing, 1908)

Byblis anisuropus Stebbing, 1908b: 12, pl. 10.

Ampelisca anisuropa: Griffiths, 1974b: 220.

Records: 32/16/D to 34/18/D and 34/18/FB/T, O, quite common.

Distribution: Endemic, Natal to Lambert's Bay.

Ampelisca anomala Sars, 1882

Ampelisca anomala: Sars, 1895: 178, pl. 62 (fig. 2).

Records: 31/18/O, D and 32/16/VD to 34/18/T, O, D and 34/18/FB/T, O, locally abundant.

Distribution: Scandinavia, southern Africa.

Ampelisca brachyceras Walker, 1904

Ampelisca brachyceras Walker, 1904: 252, pl. 2 (fig. 13).

Records: 32/18/T to 34/18/FB/T, O, many records.

Distribution: Ceylon, southern Africa.

Ampelisca brevicornis (Costa, 1853)

Ampelisca brevicornis: Reid, 1951: 204–210, figs 9–15. Kaim Malka, 1969: 928–932, pls 1–6.

Records: 32/18/T, O, 32/17/D, 32/16/D to 34/18/FB/T, O, numerous records.

Distribution: Cosmopolitan.

Ampelisca chiltoni Stebbing, 1888

Ampelisca chiltoni: J. L. Barnard, 1961: 61, fig. 31.

Records: 32/16/D, 34/18/I and 34/18/FB/T, O, a few records.

Distribution: Australia, New Zealand, southern Africa.

Ampelisca diadema (Costa, 1853)

Ampelisca diadema: Chevreux & Fage, 1925: 82, fig. 74.

Records: 32/18/T, O, 32/17/D, 32/16/D to 34/18/FB/T, O, locally common.

Distribution: Cosmopolitan.

Ampelisca excavata K. H. Barnard, 1925

Ampelisca excavata K. H. Barnard, 1925: 336, pl. 34 (figs 5–7). Gray & J. L. Barnard, 1970: 67–83, figs 1–5, pl. 1.

(*non*) *Ampelisca excavata*: K. H. Barnard, 1955: 82 (= *A. acris*, above).

Records: 34/18/FB/I, T, uncommon.

Diagnosis: Antennae subequal, about 40% body length; three pairs of eyes with obscure corneal lenses; article 5 of pereopods 3 and 4 not greatly lobed distally; article 2 of pereopod 5 posteriorly produced to tip of article 5, posterior margin distally excavate, apex bifurcate, article 3 half length of 4, neither article lobed; third pleonal epimeron postero-distally rounded; inner ramus of uropod 3 apically bifid; pereon segment 7 bearing two hard dorsal ridges enclosing an elongate furrow.

Distribution: Endemic to False Bay and vicinity; apparently limited to cirripede burrows in encrusting algae, usually on the shells of large gastropods.

Ampelisca fusca Stebbing, 1888

Ampelisca fusca Stebbing, 1888: 1052, pl. 105.

Records: 31/16/D to 34/18/O, D and 34/18/FB/T, O, more common at the deeper stations.

Distribution: Endemic, Moçambique to South West Africa.

Ampelisca palmata K. H. Barnard, 1916

Ampelisca palmata K. H. Barnard, 1916: 136, pl. 28 (figs 30–31).

Records: 33/17/T, O to 34/18/FB/T, O, abundant in sandy and muddy substrates.

Distribution: Senegal to Moçambique.

Ampelisca spinimana Chevreux, 1887

Ampelisca spinimana: Chevreux & Fage, 1925: 81, fig. 73.

Records: 32/18/T, O to 34/18/FB/T, O, fairly common in sandy areas.

Distribution: Europe, West and southern Africa.

Byblis gaimardi (Kröyer, 1846)

Byblis gaimardi: Mills, 1971: 367–370, figs 6A, 7.

Records: 34/18/D, a single record.

Distribution: Probably cosmopolitan.

Triodos insignis K. H. Barnard, 1916

Triodos insignis K. H. Barnard, 1916: 140, pl. 26 (figs 8–10).

Records: 34/18/D, several records.

Distribution: Endemic, Natal to Cape Peninsula.

Remarks: These records mark the rediscovery of this genus and species, previously known solely from Barnard's original two specimens collected off Natal in 1900.

Family **Amphilochidae***Amphilochus neapolitanus* Della Valle, 1893

Amphilochus neapolitanus: J. L. Barnard, 1962b: 126, fig. 3.

Records: 34/18/FB/O, a single record.

Distribution: Cosmopolitan in tropical and temperate seas.

Cyproidea ornata Haswell, 1880

Cyproidea ornata: J. L. Barnard, 1972a: 21, figs 4–5.

Records: 33/18/T to 34/18/FB/T, O, a few records.

Distribution: Indo-Pacific, extending to South West Africa.

Gitanopsis pusilla K. H. Barnard, 1916

Gitanopsis pusilla K. H. Barnard, 1916: 144.

Records: 33/18/I, T and 33/17/O to 34/18/FB/I, T, O, fairly common.

Distribution: South Atlantic, southern Indian Ocean.

Hoplopleon australis (K. H. Barnard, 1916)

Peltocoxa australis K. H. Barnard, 1916: 146, pl. 26 (fig. 13).

Records: 33/18/I, a single record.

Diagnosis: Coxae 1 and 2 concealed by greatly enlarged coxae 3 and 4; gnathopods 1 and 2 subchelate, article 6 ovate, palm oblique, convex, defined by a small spine and studded with numerous small denticles, dactyl subequal to palm, inner margin bearing a comb-like row of strong upstanding teeth; article 2 of pereopod 3 linear, that of pereopods 4 and 5 expanded; pleon segment 4 elongate with a high medio-dorsal crest along its whole length; outer ramus of uropods 1 and 2 the shorter.

Distribution: Endemic, known only from the above record.

Hoplopleon medusarum K. H. Barnard, 1932

Hoplopleon medusarum K. H. Barnard, 1932: 105, fig. 54.

(non) *Hoplopleon medusarum*: Penrith & Kensley, 1970: 230 (= *Cyproidea ornata*).

Records: 32/18/T to 34/18/FB/O, a few records.

Distribution: Endemic; Mossel Bay to Lambert's Bay.

Remarks: The distribution given by Griffiths (1974a) was based on the erroneous records of Penrith & Kensley; this species has not in fact been found farther north than Lambert's Bay.

Family **Ampithoidae***Ampithoe africana* K. H. Barnard, 1925

Ampithoe africana K. H. Barnard, 1925: 361.

Records: 34/18/FB/T, a single record.

Distribution: Endemic, Natal to False Bay.

Ampithoe falsa K. H. Barnard, 1932

Ampithoe brevipes: K. H. Barnard, 1916: 255, pl. 28 (fig. 34).

Ampithoe falsa: Ruffo, 1969: 57, figs 18-20.

Records: 33/18/T, 34/18/FB/I, a few records.

Distribution: Indian Ocean, South Africa.

Ampithoe ramondi (Audouin, 1826)

Ampithoe vaillanti K. H. Barnard, 1916: 253.

Ampithoe ramondi: J. L. Barnard, 1970b: 50, figs 18–19.

Records: 29/16/I to 34/18/FB/I, T, fairly common.

Distribution: Circumtropical.

Cymadusa filosa Savigny, 1818

Grubia australis K. H. Barnard, 1916: 258.

Cymadusa australis: K. H. Barnard, 1940: 480.

Cymadusa filosa: J. L. Barnard, 1955: 29, fig. 15.

Records: 29/17/I to 34/18/FB/I, abundant in Langebaan Lagoon, otherwise uncommon.

Distribution: Cosmopolitan in tropical and temperate seas.

Macropisthopus stebbingi K. H. Barnard, 1916

Macropisthopus stebbingi K. H. Barnard, 1916: 260, pl. 28 (figs 15–17).

Records: 34/18/I, 34/18/FB/I, T, a few records.

Distribution: Endemic, Port Elizabeth to Table Bay.

Family Argissidae

Argissa hamatipes Norman, 1869

Argissa Stebbingi: Chevreux & Fage, 1925: 90, figs 81–82.

Argissa hamatipes: Nagata, 1965: 154, fig. 7. Bousfield, 1973: 121, pl. 20 (fig. 2).

Records: 34/18/FB/O, a few records.

Diagnosis: Accessory flagellum bi-articulate; coxae 1–3 successively smaller, coxa 4 larger than 1; gnathopods 1 and 2 simple; pereopods 1 and 2 not glandular; urosome segments 2 and 3 slightly carinate; telson deeply cleft.

Distribution: Cosmopolitan.

Remarks: It is now generally accepted that *A. stebbingi* is synonymous with *A. hamatipes* (Nagata 1965; J. L. Barnard 1967). The eyes of this species are highly variable, ranging from absent to well developed with cuticular lenses. The specimens recorded here, which are the first from this family to be found in southern Africa, show well-developed eyes each bearing four cuticular lenses.

Family Cheluridae

Chelura terebrans Philippi, 1839

Chelura terebrans: Bousfield, 1973: 207, pl. 69 (fig. 1).

Records: 33/18/T, a single record.

Distribution: Cosmopolitan, wood-boring.

Family Colomastigidae

Colomastix pusilla Grube, 1864

Colomastix pusilla: J. L. Barnard, 1971: 55, fig. 24.

Records: 34/18/T, O, D, 34/18/FB/T, a few records.

Distribution: Cosmopolitan in tropical and temperate seas.

Family Coroppiidae

Aora anomala Schellenberg, 1926

Aora typica forma *anomala* Schellenberg, 1926a: 372, fig. 59.

Records: 34/18/FB/T, O, a few records.

Diagnosis: Coxa 1 ♂ not enlarged; article 2 of gnathopod 1 ♂ anteriorly smooth, articles 2 and 3 not antero-distally lobed, article 4 distally produced into a long process which extends beyond tip of article 5, article 5 postero-distally produced into an acute tooth, 6 half as large as 5, palm very short, defined by a small spine, dactyl serrate; article 6 of gnathopod 2 half length of article 5, palm convex; uropod 1 with strong interramal spine.

Distribution: Southern Atlantic.

Remarks: Both this species and the two following species have been raised to specific rank by J. L. Barnard (1972b).

Aora gibbula K. H. Barnard, 1932

Aora typica forma *gibbula* K. H. Barnard, 1932: 220, fig. 135.

Records: 34/18/FB/T, O, numerous records.

Diagnosis: Coxa 1 ♂ greatly enlarged, concealing most of head; gnathopod 1 ♂ greatly elongate, article 2 produced near its origin into a marginally crenulate anterior lobe, articles 2 and 3 not antero-distally lobed, 4 distally produced into a long process extending almost to apex of article 5, article 5 postero-distally rounded, 6 half as large as 5, palm obscure, dactyl weakly serrate; article 6 of gnathopod 2 half as long as 5, palm excavate; uropod 1 with strong interramal spine.

Distribution: Endemic, known only from False Bay.

Aora kergueleni Stebbing, 1888

Aora kergueleni Stebbing, 1888: 1073, pl. 109A, D.

Aora typica (non Kröyer, 1845): K. H. Barnard, 1916, 236; 1940: 478 (*partim*). Griffiths, 1973: 278; 1974a: 179; 1974b: 255; 1974c: 277.

Records: 29/16/I to 34/18/FB/I, T, O, abundant.

Diagnosis: Coxa 1 ♂ not enlarged; article 2 of gnathopod 1 ♂ anteriorly smooth, articles 2 and 3 not antero-distally lobed, article 4 distally produced into an

elongate process extending to apex of article 5, 5 postero-distally rounded, 6 almost as large as 5, palm short, defined by a spine, dactyl elongate, serrate; articles 5 and 6 of gnathopod 2 subequal, palm linear; uropod 1 with strong interramal spine.

Distribution: Kerguelen Island, southern Africa.

Aorcho delgadus J. L. Barnard, 1961

Aorcho delgadus J. L. Barnard, 1961: 114, fig. 80.

Records: 34/18/D, a few records.

Diagnosis: Article 3 of peduncle of antenna 1 as long as article 1, accessory flagellum 2-4 articulate; gnathopods subequal; coxae short, hardly serially touching, pereopods 1 and 2 glandular; uropods 1 and 2 with large terminal peduncular spines; rami of uropod 3 subequal, longer than peduncle, outer ramus with terminal fascicle of setae, inner with small terminal spine; telson entire, subcircular.

Distribution: Tasman Sea, South Africa.

Remarks: The above records are the first of this species from southern Africa. The material differs from that of J. L. Barnard (1961) in that the accessory flagellum of the only specimen possessing a first antenna is 2-articulate, whereas Barnard described it as 4-articulate.

Cheiriphotis megacheles (Giles, 1885)

Cheiriphotis megacheles: Walker, 1904: 284, pl. 6 (fig. 42). K. H. Barnard, 1937: 167, fig. 14A.

?*Cheiriphotis durbanensis* K. H. Barnard, 1916: 247. Ruffo, 1969: 55.

Cheiriphotis walkeri Stebbing, 1918: 68, pl. 13.

?*Cheiriphotis megacheles* forme *durbanensis*: Ledoyer, 1973: 65, pl. 14A.

Records: 33/17/T, O, D to 34/18/FB/T, O, fairly common.

Distribution: Indo-Pacific.

Remarks: The taxonomic status of this species has historically been somewhat confused and I do not wish to compound that confusion here by making definite decisions on synonymy. However, material from southern Africa can be regarded as falling into two distinct forms. The first, 'megacheles' form, common in the Cape Province, has the palm of gnathopod 2 ♂ transverse and multi-dentate. This form corresponds to Walker's *C. megacheles* and Stebbing's *C. walkeri* as well as K. H. Barnard's (1937) figure 14B. The second form, found in Natal and Moçambique, corresponds with that figured by K. H. Barnard (1937) figure 14A and described by Ledoyer (1973) and can be regarded as the 'durbanensis' form. Here the palm of gnathopod 2 ♂ is oblique and bears three large teeth, that nearest the finger-hinge being apically notched.

J. L. Barnard (1962a) figures a third form (subsequently assigned to *C. delloyei* by Ruffo) and suggests that the various forms of gnathopod 2 represent growth stages. However, mixed populations of the two southern

African forms have not yet been found. Moreover, the 'durbanensis' form, the presumed juvenile, is often larger than the 'megacheles' form and juvenile 'megacheles' specimens show no tendency to resemble the 'durbanensis' form. This would suggest that the two morphs represent distinct population groups and should be given at least sub-specific status.

Chevalia aviculae Walker, 1904

Chevalia aviculae: J. L. Barnard, 1971: 88, fig. 42.

Records: 32/18/O to 34/18/T, O, D and 34/18/FB/T, O, numerous records.

Distribution: Cosmopolitan in tropical and temperate seas.

Corophium acherusicum Costa, 1857

Corophium acherusicum: J. L. Barnard, 1971: 59, figs 17, 26. Bousfield, 1973: 201, pl. 62 (fig. 2).

Records: 33/18/T, 34/18/FB/T, a few records.

Distribution: Cosmopolitan in tropical and temperate seas.

Corophium triaenonyx Stebbing, 1904

Corophium triaenonyx Stebbing, 1904: 25, pl. 6A.

Records: 34/18/FB/T, 34/19/E, a few records.

Distribution: Widespread tropical and subtropical, particularly in brack waters.

Gammaropsis afra Stebbing, 1888

Eurystheus afer: K. H. Barnard, 1916: 249, pl. 28 (fig. 11).

Gammaropsis afra: J. L. Barnard, 1961: 113, fig. 79; 1970b: 170, fig. 108.

Records: 31/18/O, 32/16/D, 34/18/FB/O, 35/18/D, a few records.

Distribution: Circumtropical.

Gammaropsis atlantica Stebbing, 1888

Eurystheus atlanticus: Stebbing, 1910a: 461.

Gammaropsis atlantica: J. L. Barnard, 1970b: 174, figs 111-113.

Records: 33/18/T to 34/18/FB/T, O and 34/18/O, D, abundant.

Distribution: Circumtropical.

Gammaropsis holmesi (Stebbing, 1908)

Eurystheus holmesi Stebbing, 1908b: 85, pl. 14A. K. H. Barnard, 1955: 95, fig. 48A-D.

Eurystheus semidentatus K. H. Barnard, 1916: 250, pl. 28 (figs 13, 14).

Gammaropsis holmesi: Griffiths, 1974b: 244.

Records: 34/18/T, O, 34/18/FB/I, T, O, fairly common.

Distribution: Endemic, Natal to Cape Peninsula.

Gammaropsis longicarpus (Reid, 1951)

Fig. 3

Eurystheus longicarpus Reid, 1951: 259, fig. 50.

Records: 34/18/FB/T, O, a few records.

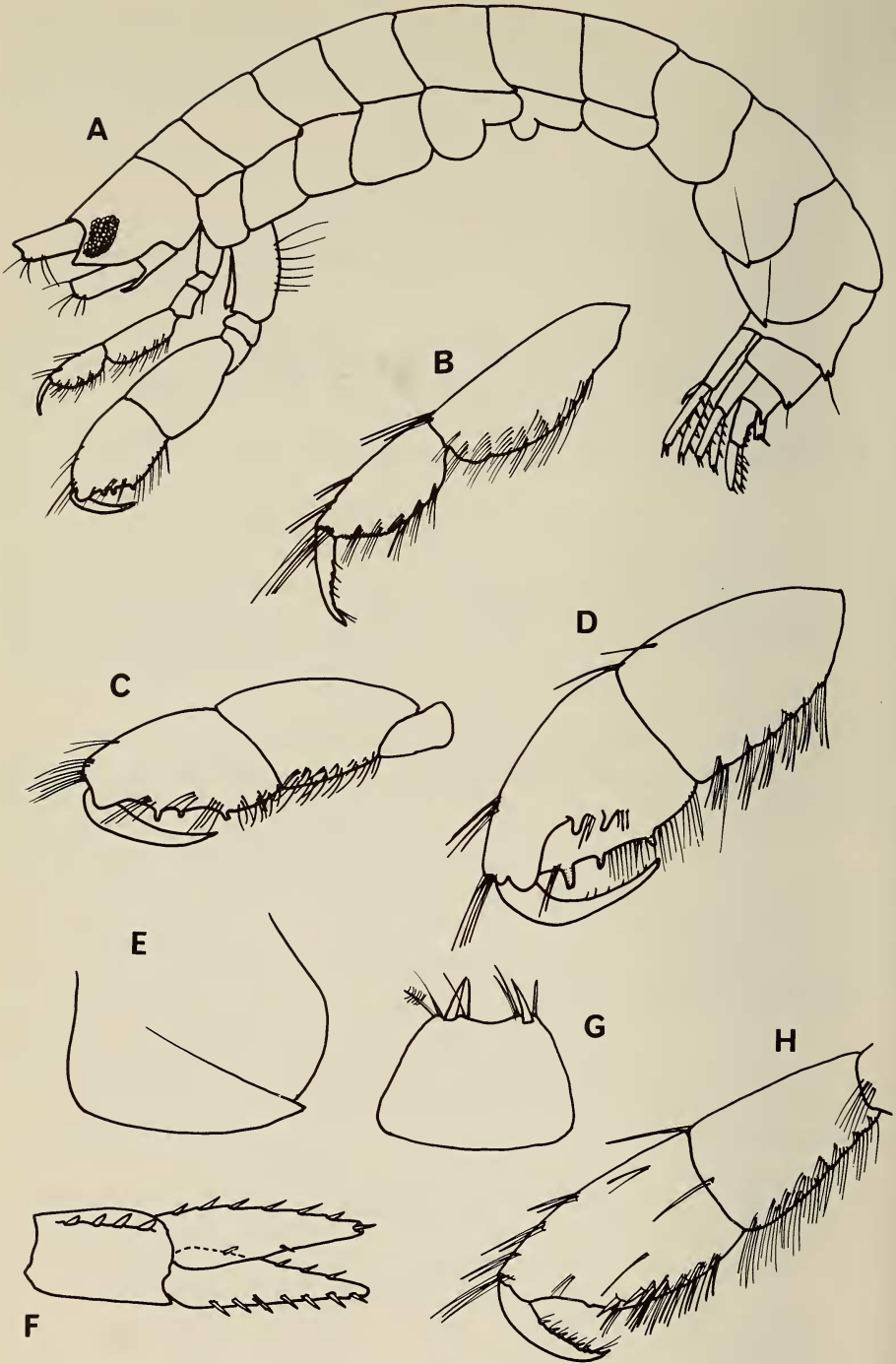


Fig. 3. *Gammaropsis longicarpus* (Reid, 1951)

Male, 7 mm: A—lateral aspect; B—gnathopod 1; C—gnathopod 2 (outer aspect); D—gnathopod 2 (inner aspect); E—third pleonal epimeron; F—uropod 3; G—telson.
 Female, 6 mm: H—gnathopod 2.

Diagnosis: Eyes quadrate; coxa 1 not strongly produced forwards; articles 5 and 6 of gnathopod 2 ♂ subequal, article 6 of terminal male with two peg-like teeth on medial margin and three such teeth along palmar margin (subadult with palmar teeth but lacking medial teeth); third pleonal epimeron with an oblique ridge running to a small postero-distal tooth, hind margin strongly convex; urosome segments 1 and 2 each with a pair of small subdorsal teeth; uropod 3 slightly exceeding 1 and 2, rami subequal to peduncle.

Distribution: West and southern Africa.

Remarks: Adult males from the present material are larger and show more highly developed second gnathopods than those described by Reid (1951). However, subadults from False Bay agree closely with Reid's brief description and on this basis I have associated the two.

Gammaropsis palmoides (K. H. Barnard, 1932)

Eurystheus palmoides K. H. Barnard, 1932: 231, fig. 144; 1955: 96, fig. 48e-g.

Records: 34/18/FB/T, O, numerous records.

Diagnosis: Eyes round, optic lobes short, rounded; article 6 of gnathopod 2 ♂ much longer than 5, palm oblique, occupying almost entire posterior margin of hand, defined by an acute tooth and bearing a large medial tooth and two small distal teeth, dactyl equal to palm, closing within it; pleon segments dorsally smooth; third pleonal epimeron minutely produced postero-distally; uropod 3 very short, not extending to apex of uropod 2.

Distribution: Endemic to False Bay.

Gammaropsis scissimanus (K. H. Barnard, 1925)

Fig. 4

Eurystheus scissimanus K. H. Barnard, 1925: 361, pl. 34 (fig. 15).

Records: 33/17/O, 34/18/D, 34/18/FB/O, a few records.

Diagnosis: Eyes oval; ocular lobes of head acute; article 6 of gnathopod 2 ♂ considerably larger than 5, palm transverse, shorter than hind margin, defined by a small tooth and with a deep semicircular concavity distally, remainder of palm minutely crenulate; pleon segments dorsally smooth; third pleonal epimeron postero-distally rounded-quadrate; uropod 3 moderately elongate, reaching apex of uropod 2.

Distribution: Endemic, False Bay to Saldanha Bay.

Remarks: This species has not been adequately figured before so I have provided full figures here. Antenna 1 was previously unknown and has an 11-articulate flagellum with a 5-articulate accessory flagellum. This confirms the correct placement of *G. scissimanus* in *Gammaropsis* rather than *Podoceropsis* (in which the accessory flagellum is 0-2 articulate).

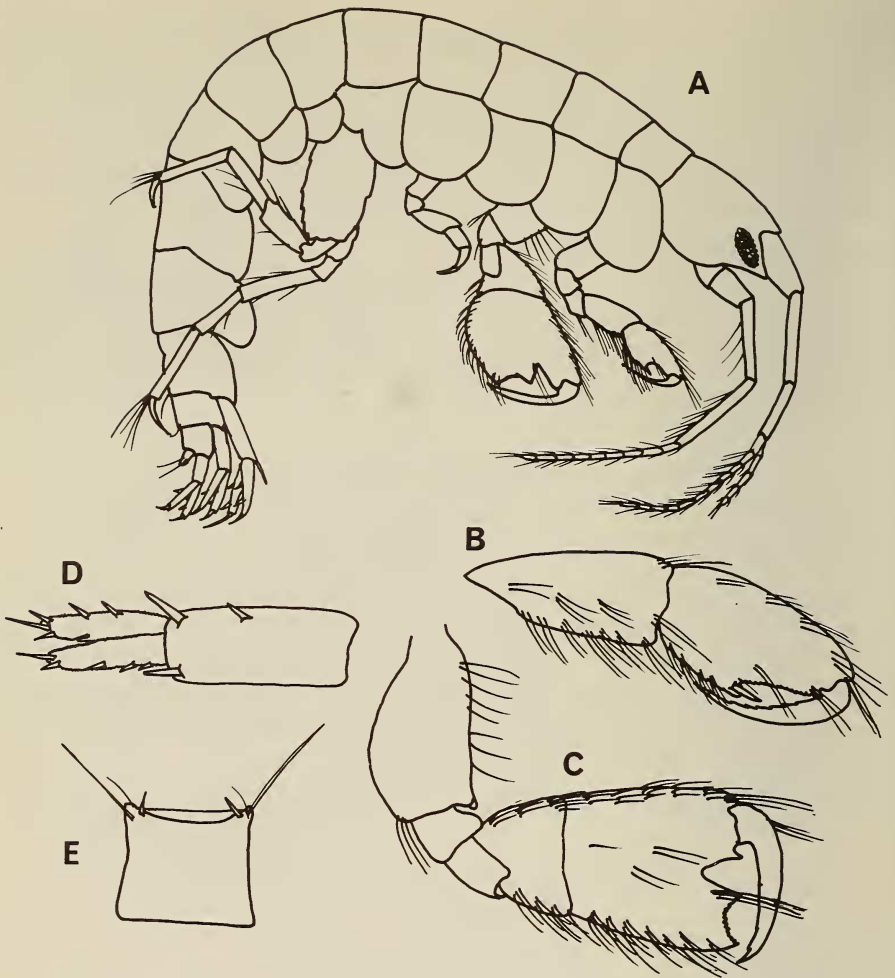


Fig. 4. *Gammaropsis scissimanus* (K. H. Barnard, 1925)
Male, 4 mm: A—lateral aspect; B—gnathopod 1; C—gnathopod 2; D—uropod 3;
E—telson.

Grandidierella lignorum K. H. Barnard, 1935

Grandidierella lignorum K. H. Barnard, 1935: 300, fig. 14.

Records: 34/19/E, a single record.

Distribution: Endemic, Cape Agulhas to Natal, estuarine.

Grandidierella lutosa K. H. Barnard, 1952

Grandidierella lutosa K. H. Barnard, 1952: 280, fig. 3.

Records: 34/19/E, two records.

Diagnosis: Pereon segments without medio-ventral processes; coxae 1 and 2

quadrate, not acutely pointed; article 2 of gnathopod 1 ♂ widening distally, article 5 enlarged, two strong teeth on distal margin, article 6 curved, palm transverse, dactyl hardly exceeding palm; gnathopod 2 ♂ subchelate, much smaller than gnathopod 1.

Distribution: Endemic to estuaries near Hermanus.

Lemboides acanthiger K. H. Barnard, 1916

Lemboides acanthiger K. H. Barnard, 1916: 239, pl. 28 (figs 7–8).

Records: 34/18/FB/O, a single record.

Distribution: Endemic, Natal to False Bay.

Lemboides afer Stebbing, 1895

Lemboides afer: K. H. Barnard, 1932: 222, fig. 137.

Records: 33/18/T, 34/18/FB/T, O, fairly common.

Distribution: Endemic, False Bay to South West Africa.

Lemboides crenatipalma K. H. Barnard, 1916

Lemboides crenatipalma K. H. Barnard, 1916: 240, pl. 28 (figs 9–10).

Records: 32/18/T, 33/18/T, 33/17/O, a few records.

Distribution: Endemic, Saldanha Bay to South West Africa.

Lembos hirsutipes Stebbing, 1895

Lembos hirsutipes Stebbing, 1895: 207, pl. 8, 9B. Karaman, 1972: 101, figs 1–2.

Records: 32/18/T to 34/18/FB/T, O, a few records.

Diagnosis: Pereon segments ventrally smooth; article 2 of gnathopod 1 ♂ strongly setose posteriorly, palm slightly oblique, a small tooth near finger hinge separated from long defining tooth by a deep cleft; article 2 of gnathopod 2 ♂ not antero-distally produced, article 5 longer than 6; article 4 of pereopods 1 and 2 ♂ strongly setose.

Distribution: South Africa to tropical West Africa.

Lembos hypacanthus K. H. Barnard, 1916

Lembos hypacanthus K. H. Barnard, 1916: 237, pl. 28 (figs 5–6).

Records: 33/18/T, 34/18/I, 34/18/FB/I, a few records.

Diagnosis: Pereon segments 3–7 in ♂ each bearing a strong medio-ventral

spinose process; article 2 of gnathopod 1 ♂ weakly setose, palm slightly oblique, defined by a single spine and bearing a minute tooth near finger hinge and a larger spiniform one near defining angle; article 2 of gnathopod 2 ♂ with antero-distal apex produced as a recurved hook, article 6 as long as, but narrower than, 5; article 4 of pereopods 1 and 2 ♂ not strongly setose.

Distribution: Endemic, Natal to South West Africa.

Lembos leptocheirus Walker, 1909

Lembos leptocheirus: Walker, 1909: 338, pl. 43 (fig. 7). Schellenberg, 1926a: 373.

Records: 33/17/T, 33/18/T, 34/18/FB/T, a few records.

Diagnosis: Pereon segments ventrally smooth; article 2 of gnathopod 2 ♂ naked, palm slightly oblique, convex distally and with a semicircular concavity next to defining tooth; article 2 of gnathopod 2 ♂ not produced antero-distally, article 6 much longer than 5; article 4 of pereopods 1 and 2 ♂ sparsely setose.

Photis dolichommata Stebbing, 1910

Photis dolichommata Stebbing, 1910b: 609, pl. 55B.

Records: 34/18/FB/T, O, a few records.

Distribution: Australia, South Africa.

Photis longidactylus Griffiths, 1974

Photis longidactylus Griffiths, 1974a: 193, fig. 6.

Records: 32/18/T, O to 34/18/FB/T, O, numerous records.

Distribution: Endemic, False Bay to South West Africa.

Photis longimanus Walker, 1904

Photis longimanus: Rabindranath, 1971b: 71, figs 3-4.

(non) *Photis longimanus*: K. H. Barnard, 1916: 224 (= *P. kapapa*).

Records: 32/18/T to 34/18/FB/T, O, common, especially in Saldanha Bay and False Bay.

Distribution: India, Ceylon, southern Africa.

Remarks: The material from Durban Bay attributed to this species by K. H. Barnard (1916) and subsequently reported by Griffiths (1974b) in fact represents *P. kapapa* J. L. Barnard. This species is distinguished from *P. longimanus* by the shape of articles 2 and 6 of the ♂ second gnathopod and the presence of stridulation ridges on the anterior coxae.

Photis uncinata K. H. Barnard, 1932

Photis longicaudata: K. H. Barnard, 1916: 243, pl. 28 (fig. 26).

Photis uncinata K. H. Barnard, 1932: 223, fig. 138.

Records: 33/17/T, O to 34/18/FB/T, O, abundant, particularly in False Bay.

Distribution: Endemic to South Africa.

Podoceropsis sophiae Boeck, 1861

Podoceropsis sophiae: Chevreux & Fage, 1925: 316, fig. 324. Reid, 1951: 264, fig. 53. Karaman, 1972: 121, figs 9–11.

Records: 34/18/FB/O, two records.

Diagnosis: Accessory flagellum absent; palm of gnathopod 1 ♂ undefined, dactyl almost as long as hand, its inner margin serrate; article 5 of gnathopod 2 ♂ very short, bearing a narrow posterior lobe, article 6 with medial surface strongly setose, palm oblique, subequal to hind margin, strongly concave proximally, a large lobe near finger hinge distally divided into two teeth, dactyl sinuous near base, closing within palm; article 2 of pereopod 3 posteriorly produced into a distinctive rectangular projection.

Distribution: Atlantic.

Remarks: This is the first record of this species from southern Africa.

Pseudomegamphopus jassopsis (K. H. Barnard, 1951)

Lembos jassopsis K. H. Barnard 1951, 706, fig. 6.

Pseudomegamphopus jassopsis: Myers 1974: 195, figs 1–4

Records: 32/18/T, 33/17/T, 33/18/T, a few records.

Diagnosis: Article 5 of gnathopod 1 narrow, triangular, article 6 enormous, palm oblique, defined by a huge lobe which becomes fleshy and triangular in terminal male, dactyl bearing long setae on posterior margin; outer ramus of uropod 3 shorter and broader than inner, bearing a small article 2 terminating in two long setae.

Distribution: Endemic, the above records (most of which are from Saldanha Bay) are the only ones to date.

Remarks: This species has been removed from *Lembos* to *Pseudomegamphopus* by Myers 1974, who also supplies a detailed redescription of the species. *Pseudomegamphopus* may be distinguished from *Lembos* by the deeply recessed head and elongate article 3 of antenna 1.

Siphonoecetes dellavallei Stebbing, 1893

Siphonoecetes dellavallei: Chevreux & Fage, 1925: 361, fig. 369.

Records: 33/18/T, 33/17/T, O to 34/18/FB/T, O and 34/19/E, common, particularly in False Bay and Saldanha Bay.

Distribution: Mediterranean, southern Africa.

Unciolella foveolata K. H. Barnard, 1955

Unciolella foveolata K. H. Barnard, 1955: 97, fig. 49.

Records: 34/18/FB/O, 32/16/D, a few records.

Diagnosis: Integument coarsely pitted; accessory flagellum 4-5 articulate; pereon segments without ventral spines; gnathopods subequal, subchelate, medial surfaces of articles 5 and 6 of gnathopod 2 strongly setose; uropods 1 and 2 hardly extending beyond tip of uropod 3, uropod 3 uniramous, ramus with apical tuft of plumose setae.

Distribution: Endemic, False Bay to Lambert's Bay.

Unciolella spinosa Griffiths, 1974

Unciolella spinosa Griffiths, 1974b: 229, fig. 3.

Records: 33/17/T, O, D to 34/18/FB/T, O, a few records.

Distribution: Endemic, Natal to Saldanha Bay.

Remarks: The discovery of further specimens of this form has shown that, as is the case in other Corophiidae (e.g. *Grandidierella bonnieroides*), the medio-ventral spines of the ♂ pereon may be present or absent within the same species. This feature should thus not be relied upon during identification. In the present instance *U. spinosa* is best distinguished from *U. foveolata* on the basis of its elongate first and second uropods, which exceed uropod 3 by about half their length.

Family **Dexaminidae***Atylus granulosus* (Walker, 1904)

Atylus granulosus: Ledoyer, 1967: 127, fig. 8.

Records: 32/18/T, O to 34/18/FB/T, O, numerous records.

Distribution: Indian Ocean.

Atylus guttatus (Costa, 1851)

Nototropis guttatus: Chevreux & Fage, 1925: 194, figs 201-203.

Records: 32/18/T, O to 34/18/FB/T, fairly common, especially in Saldanha Bay.

Distribution: Eastern Atlantic, extending around south coast of South Africa.

Atylus homochir Haswell, 1885

Atylus homochir: Stebbing, 1888: 908-913, pl. 74. J. L. Barnard, 1974: 12, figs 7-9.

Records: 33/17/O, a single record.

Distribution: Australia, South Africa.

Atylus swammerdami (Milne-Edwards, 1830)

Atylus swammerdami: Bousfield, 1973: 131.

Records: 32/18/T, a few records.

Distribution: Atlantic, extending along south coast of South Africa.

Dexamine spiniventris (Costa, 1853)

Dexamine spiniventris: Chevreux & Fage, 1925: 262, figs 271–273.

Records: 33/18/T, a single record.

Diagnosis: Accessory flagellum absent; mandible without palp; maxillipedal palp 3-articulate; article 2 of pereopods 3–5 successively wider, article 4 shorter than 5 plus 6; pleon segments 2–3 (sometimes 1–3) each with a medio-dorsal tooth and a pair of lateral teeth; third pleonal epimeron acutely produced postero-distally; urosomite 1 with an acute medio-dorsal carina; urosomites 2 and 3 coalesced; telson 60% cleft, reaching almost to apex of uropod 3.

Distribution: Mediterranean, Atlantic.

Guernea rhomba Griffiths, 1974

Guernea laevis (non Chevreux, 1887): K. H. Barnard, 1916: 213.

Guernea rhomba Griffiths, 1974a: 183, fig. 3.

Records: 34/18/I, a single record.

Distribution: Endemic, Cape Town to South West Africa.

Paradexamine pacifica (Thomson, 1879)

Paradexamine pacifica: J. L. Barnard, 1972b: 60.

Records: 34/18/FB/T, a single record.

Diagnosis: Article 5 of gnathopods 1–2 about 1,3 times length of article 6, palms pectinate; pleon segment 1 dorsally smooth, pleon segments 2 and 3 each with a medio-dorsal tooth and a pair of lateral teeth; third pleonal epimeron postero-distally acutely produced; urosomite 1 with a sharp medio-dorsal tooth and a pair of subdorsal spines; urosomites 2 and 3 fused, bearing two subdorsal spines on each side; apices of telson cut into 8–10 serrations.

Distribution: Indo-Pacific.

Polycheria atolli Walker, 1905

Polycheria antarctica: Chilton, 1912: 502. K. H. Barnard, 1916: 211.

Polycheria atolli: Ledoyer, 1972a: 205, pl. 27.

Records: 32/18/T to 34/18/FB/T, O, numerous records.

Distribution: Southern oceans, extending to tropical Indian Ocean.

Family **Eusiridae***Calliopiella michaelsoni* Schellenberg, 1925

Calliopiella michaelsoni: K. H. Barnard, 1940: 451, fig. 24. Griffiths, 1974a: 180.

Records: 33/17/I, T to 34/19/I, common under the shells of *Patella* spp.

Distribution: Endemic, Cape Agulhas to South West Africa.

Cleonardopsis carinata K. H. Barnard, 1916

Cleonardopsis carinata K. H. Barnard, 1916: 176, pl. 27 (figs 7-9).

Records: 35/18/VD, a single record.

Diagnosis: Accessory flagellum uni-articulate; gnathopods subchelate, article 5 almost as long as 6, lobed posteriorly, palm very oblique, undefined; pereon segments 6 and 7 and pleon segments 1 and 2 with medio-dorsal carinae ending in acute teeth; pleon segment 3 with medio-dorsal carina posteriorly extended with a hooked process; telson unarmed, 30% cleft.

Distribution: Endemic to deep waters around Cape Peninsula.

Eusiroides monoculoides (Haswell, 1880)

Eusiroides monoculoides: J. L. Barnard, 1964: 221, fig. 1.

Records: 32/18/T to 34/18/FB/T, O, fairly common.

Distribution: Circumtropical.

Paramoera bidentata K. H. Barnard, 1932

Paramoera bidentata K. H. Barnard, 1932: 211, figs 118m, 129.

Records: 32/18/I to 34/18/FB/I and 34/18/T, a few records.

Distribution: Endemic, Still Bay to Lüderitz.

Paramoera capensis (Dana, 1853)

Paramoera capensis: K. H. Barnard, 1916: 183-186.

Paramoera schizurus Stebbing, 1918: 66, pl. 10.

Records: 29/16/I to 34/18/FB/T, O and 34/19/I, E, the most abundant species found in this area at depths of less than 100 m.

Distribution: Southern oceans.

Rhachotropis grimaldi (Chevreux, 1887)

Rhachotropis grimaldi: Stebbing, 1888: 1641. K. H. Barnard, 1916: 179.

Records: 32/17/D, 34/18/D, VD, a few records.

Distribution: Atlantic, extending to Natal.

Rhachotropis kergueleni Stebbing, 1888

Rhachotropis kergueleni Stebbing, 1888: 955, pl. 85.

Records: 34/18/VD, a single record.

Diagnosis: Pereon dorsally smooth; pleon segments 1 and 2 each with an acute-tipped medio-dorsal carina and a pair of acutely tipped subdorsal ridges; pleon segment 3 with a single carina, 4 with a single carina terminating in a large tooth; pleonal epimera 1 and 2 postero-distally rounded, 3 postero-distally serrate; hind margin of article 2 of pereopods 3–5 serrate, postero-distal corner acute, slightly produced.

Distribution: Kerguelen Island, South Africa.

Rhachotropis paeneglaber K. H. Barnard, 1916

Rhachotropis paeneglaber K. H. Barnard, 1916: 181, pl. 27 (fig. 10).

Records: 34/18/D, VD, two records.

Diagnosis: Pereon dorsally smooth; pleon segment 1 with an obscure median keel, 2 with three keels each terminating in an acute tooth, 3 with three distally untoothed keels; pleon segment 4 with median keel ending acutely, subdorsal keels not extending as far as posterior margin of segment; pleonal epimera 1 and 2 postero-distally rounded, 3 postero-distally serrate; hind margin of article 2 of pereopods 3 and 4 smooth, that of pereopod 5 faintly serrate, postero-distal corner rounded.

Distribution: Endemic, the above records are the only ones to date.

Rhachotropis palporum Stebbing, 1908

Rhachotropis palporum Stebbing, 1908a: 194, pl. 28.

Records: 34/18/D–VD, a single record.

Diagnosis: Pereon dorsally smooth; pleon segments 1–3 each with three keels, all ending in elongate acute teeth; pleon segment 4 with a minute medio-dorsal tooth; pleonal epimera 1 and 2 with a single acute tooth at centre of posterior margin, postero-distally rounded, third pleonal epimeron similar but postero-distally acutely produced; article 2 of pereopods 3–5 with a large blunt process arising from centre of posterior margin, otherwise smooth.

Distribution: North and South Atlantic.

Family Gammaridae

Ceradocus rubromaculatus (Stimpson, 1855)

Ceradocus rubromaculatus: J. L. Barnard, 1972a: 220, fig. 129.

Records: 29/16/I to 34/18/FB/I, T, O, and 35/18/D, abundant, particularly intertidally and in shallow rocky areas.

Distribution: Indo-Pacific, extending to South West Africa.

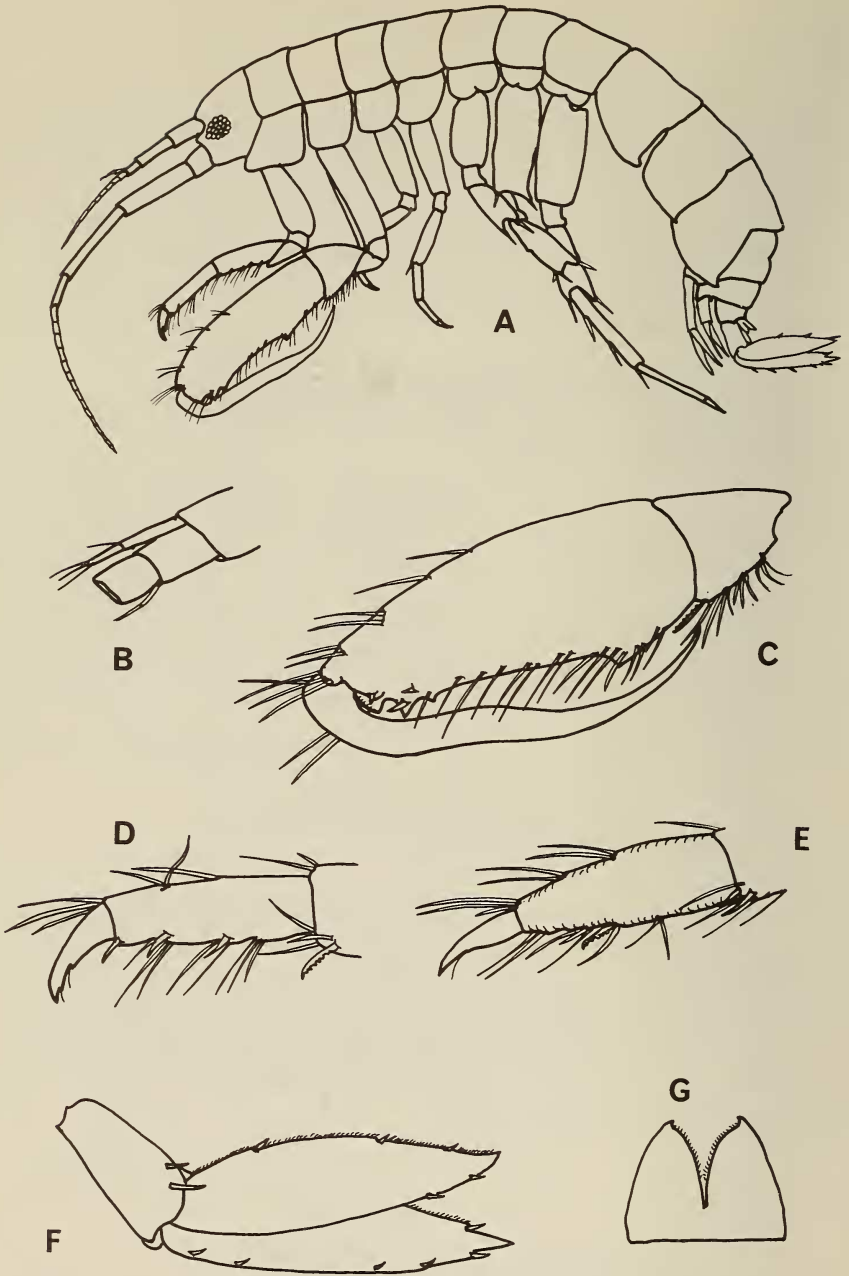


Fig. 5. *Cheirocratus inermis* Ledoyer, 1968

Male, 4 mm: A—lateral aspect; B—accessory flagellum; C—articles 5-7 of gnathopod 2.
 Female, 3,5 mm: D—articles 6 and 7 of gnathopod 1; E—articles 6 and 7 of gnathopod 2;
 F—uropod 3; G—telson.

Cheirocratus inermis Ledoyer, 1968

Fig. 5

Cheirocratus inermis Ledoyer, 1968: 36, pl. 12.

Records: 34/18/FB/O, a few records.

Diagnosis: Antenna 1 shorter than peduncle of antenna 2, accessory flagellum 2-articulate; body dorsally smooth; gnathopod 1 simple; gnathopod 2 ♀ simple; gnathopod 2 ♂ strongly subchelate, article 6 elongate, palm occupying almost whole hind margin of hand, distally cut into three teeth, dactyl sinuous, exceeding length of hand; uropod 3 greatly exceeding 1 and 2, rami equal, the inner uni-articulate; telson cleft nearly to base.

Distribution: Madagascar, South Africa.

Remarks: This is the first record of a male of this species and only the second time the species has been found. The female agrees closely with Ledoyer's original description, while the male shows powerful second gnathopods, a feature unusual for this genus. *C. inermis* is the only member of the genus *Cheirocratus* in which the pereon is dorsally smooth.

Elasmopus affinis Della Valle, 1893

Elasmopus affinis: Sars, 1895: 521, pl. 183.

Records: 33/17/T, 33/18/I, T, fairly common.

Distribution: Mediterranean, Atlantic, southern Indian Ocean.

Elasmopus japonicus Stephensen, 1932

Elasmopus japonicus: Sivaprakasam, 1968: 278, figs 3-5.

Records: 34/18/FB/I, a few records.

Distribution: Indo-Pacific, extending to South West Africa.

Elasmopus pecteniscrus Bate, 1862

Elasmopus pecteniscrus: J. L. Barnard, 1970b: 125, figs 73-74.

Records: 34/18/FB/I, a single record.

Distribution: Cosmopolitan in tropical and temperate seas.

Eriopisa epistomata Griffiths, 1974

Eriopisa epistomata Griffiths, 1974a: 186, fig. 4.

Records: 34/18/FB/O, a single record.

Distribution: Endemic, Port Elizabeth to South West Africa.

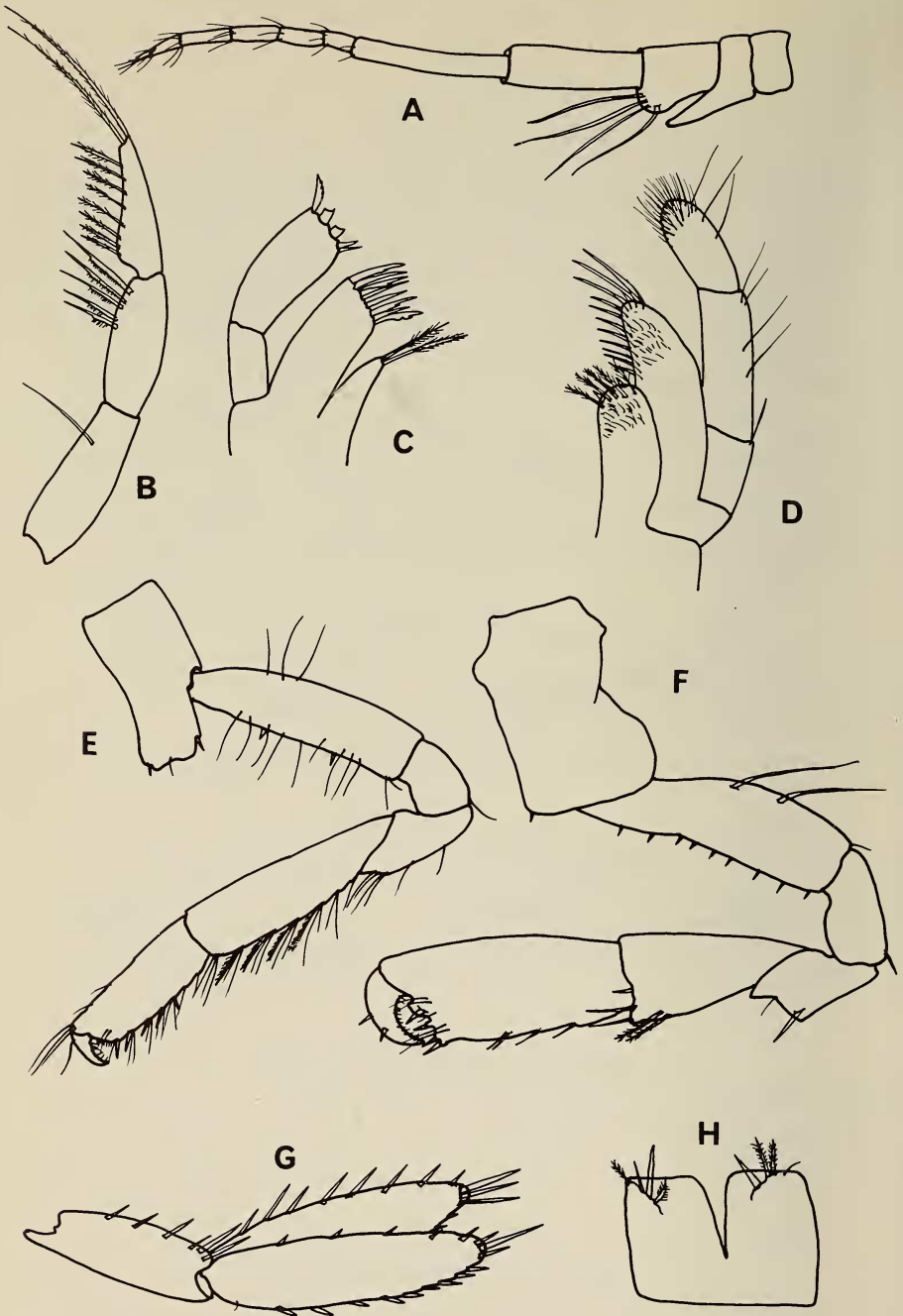


Fig. 6. *Jerbarnia mecochira* Croker, 1971

Male, 6 mm: A—antenna 2; B—mandibular palp; C—maxilla 1; D—maxilliped;
E—gnathopod 1; F—gnathopod 2; G—uropod 3; H—telson.

Eriopisella capensis (K. H. Barnard, 1916)

Eriopisella capensis K. H. Barnard, 1916: 187, pl. 27 (figs 16–19).

Records: 32/17/D, 32/16/D to 34/18/D, a few records.

Distribution: Endemic to south and west coasts of South Africa.

Jerbarnia mecochira Croker, 1971

Fig. 6

Jerbarnia mecochira Croker, 1971: 382–386, figs 1–2.

Records: 34/18/FB/T, O, a few records.

Diagnosis: Accessory flagellum multi-articulate; article 3 of antenna 2 with a posterior setose lobe; maxillipedal palp 3-articulate; gnathopod 2 extremely long, article 3 elongate; coxae 5–7 and pleonal epimera 1–3 each with a spine at postero-distal corner; pleon segments 1–3 dorsally cut into five teeth, a seta in each concavity; pleon segments 4 and 5 with two posterior teeth, 6 with two dorsal spines; uropod 3 greatly exceeding 1 and 2, outer ramus minutely bi-articulate or not; telson quadrate, 50% cleft.

Distribution: Eniwetok Atoll, South Africa.

Remarks: As shown by figure 6 the present material conforms closely to that described by Croker from the Pacific. The specimen figured is considerably larger than Croker's (6 mm as against 4,5 mm) but is apparently less mature, having a relatively shorter article 3 of gnathopod 2 and less highly developed coxae.

Maera boeckii (Haswell, 1879)

Elasmopus boeckii: K. H. Barnard, 1916: 199, pl. 27 (figs 13–14).

Maera boeckii: K. H. Barnard, 1940: 460.

Records: 34/18/FB/T, O, a few records.

Distribution: Australia, South Africa.

Maera bruzeli Stebbing, 1888

Fig. 7

Maera bruzelii Stebbing, 1888: 1014, pl. 97.

Maera mastersi (non Haswell, 1880): Griffiths, 1974c: 290.

Records: 33/17/O, 34/18/D, 34/18/FB/T, O, 34/19/?, a few records.

Distribution: Endemic, Port Elizabeth to Saldanha Bay.

Remarks: This species was originally described only from the female and when samples containing only males were recovered by Griffiths (1974c) these were erroneously identified as *M. mastersi*. However, the present samples contain both males and females and clearly show the two to represent the same species. The

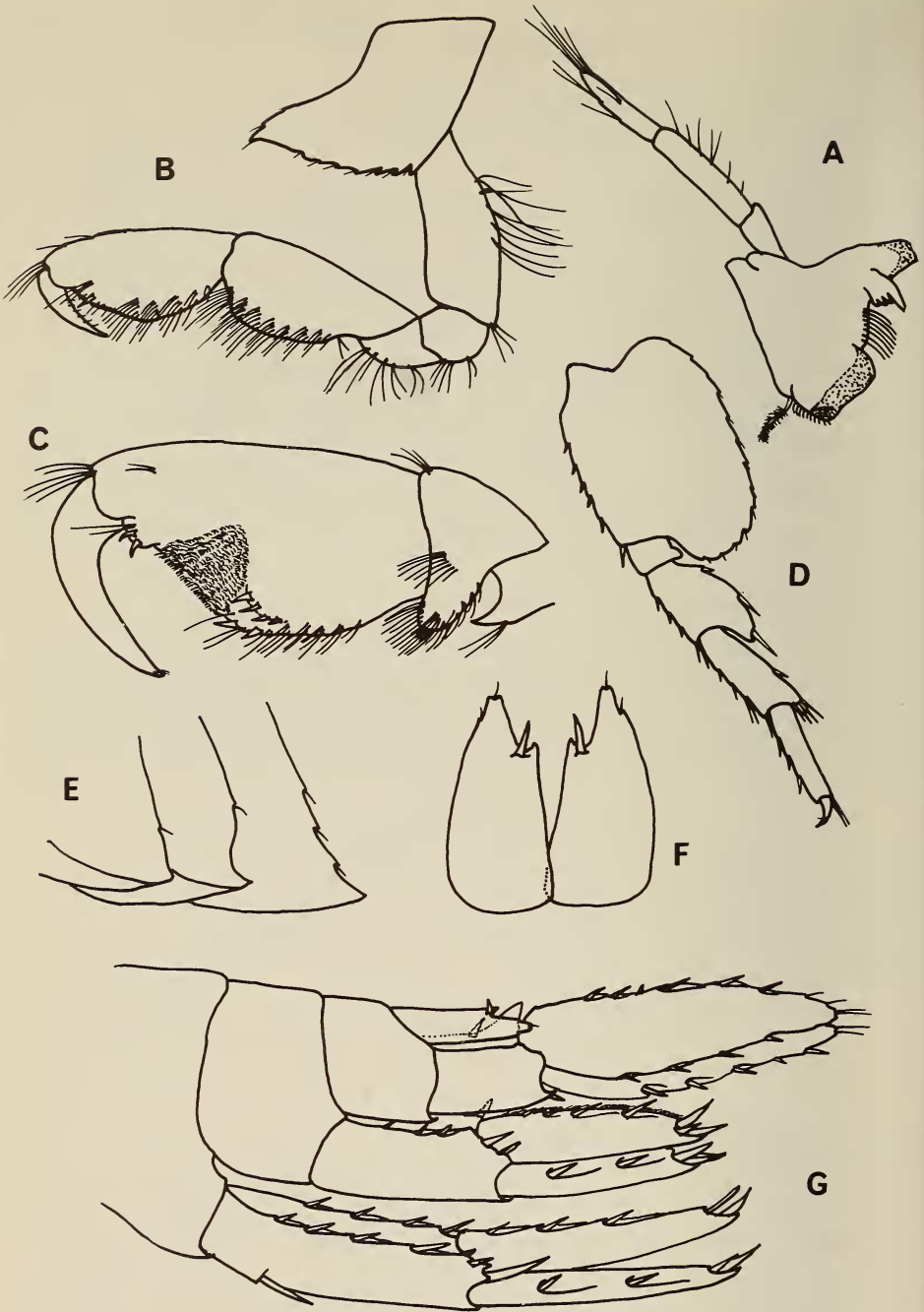


Fig. 7. *Maera bruzeli* Stebbing, 1888

Male, 14 mm: A—mandible; B—gnathopod 1; C—articles 5-7 of gnathopod 2 (inner aspect); D—pereiopod 5; E—pleonal epimera; F—telson; G—urosome.

male *M. bruzeli* is distinguished by the unusual second gnathopod, in which the inner surface of the palm is covered by a dense pad of short tightly-packed setae (Fig. 7C).

(The record of *M. mastersi* from Moçambique by K. H. Barnard (1916), is of the true *mastersi*.)

Maera emarginata sp. nov.

Fig. 8

Description of male (5 mm): Head as long as first two pereon segments, lacking lateral cephalic notch, eyes absent; antenna 1 as long as pereon, articles 1 and 2 subequal, much longer than 3, flagellum subequal to peduncle, 16-articulate, accessory flagellum (Fig. 8B) of two long articles and one short one; antenna 2 much shorter than 1, gland cone conspicuous, flagellum 7-articulate; mandible (Fig. 8C) with tridentate incisor, lacinia mobilis of four strong teeth, spine row of four spines, molar powerful, palp 3-articulate, article 2 the longest; lower lip without inner lobes; lobes of maxillae 1 and 2 setose only terminally; palp of maxilliped 4-articulate.

Gnathopod 1 considerably smaller than 2, articles 5 and 6 subequal, densely setose posteriorly, palm oblique, subequal to hind margin, but not clearly defined from it, palmar margin finely pectinate with submarginal rows of small spines; gnathopod 2 strongly subchelate, article 6 considerably larger than 5, palm oblique, subequal to hind margin, defined by two spines and bearing three equally spaced teeth (Fig. 8D), dactyl subequal to palm; pereopods 1 and 2 slender, 2 somewhat the shorter; (pereopods 3 and 4 missing); pereopod 5 elongate, extending to apex of uropods 1 and 2, article 2 not greatly expanded posteriorly, posterior margin cut into seven moderate serrations, articles 4 and 5 with strong posterior spines.

Pleonal epimera 1 and 2 smoothly rounded, 3 with a slight postero-distal tooth; none of pleon segments dorsally dentate or carinate; uropod 1 (Fig. 8E) slightly exceeding 2, peduncle with a strong proximal spine and a large distal spine on medial surface, outer ramus 70% length of inner, both strongly spinose apically; peduncle of uropod 2 (Fig. 8F) with five dorsal spines, outer ramus slightly the shorter, bearing four dorsal and three apical spines, inner ramus with a row of ten upright dorsal spines and five apical spines; uropod 3 (Fig. 8G) greatly exceeding 1 and 2, rami subequal, outer ramus with one large and two small dorsal spines, also three apical spines, inner ramus with four ventral fascicles of spines and four spines apically; telson (Fig. 8H) not more than 25% cleft, a single blunt spine within a shallow notch at apex of each lobe.

Holotype: SAM-A13473, male, 5 mm.

Type-locality: 34°17'S/18°29'E, 15 February 1965, depth 27 m, substrate shelly sand.

Relationships: The telson of *M. emarginata* sp. nov. is highly unusual in that it

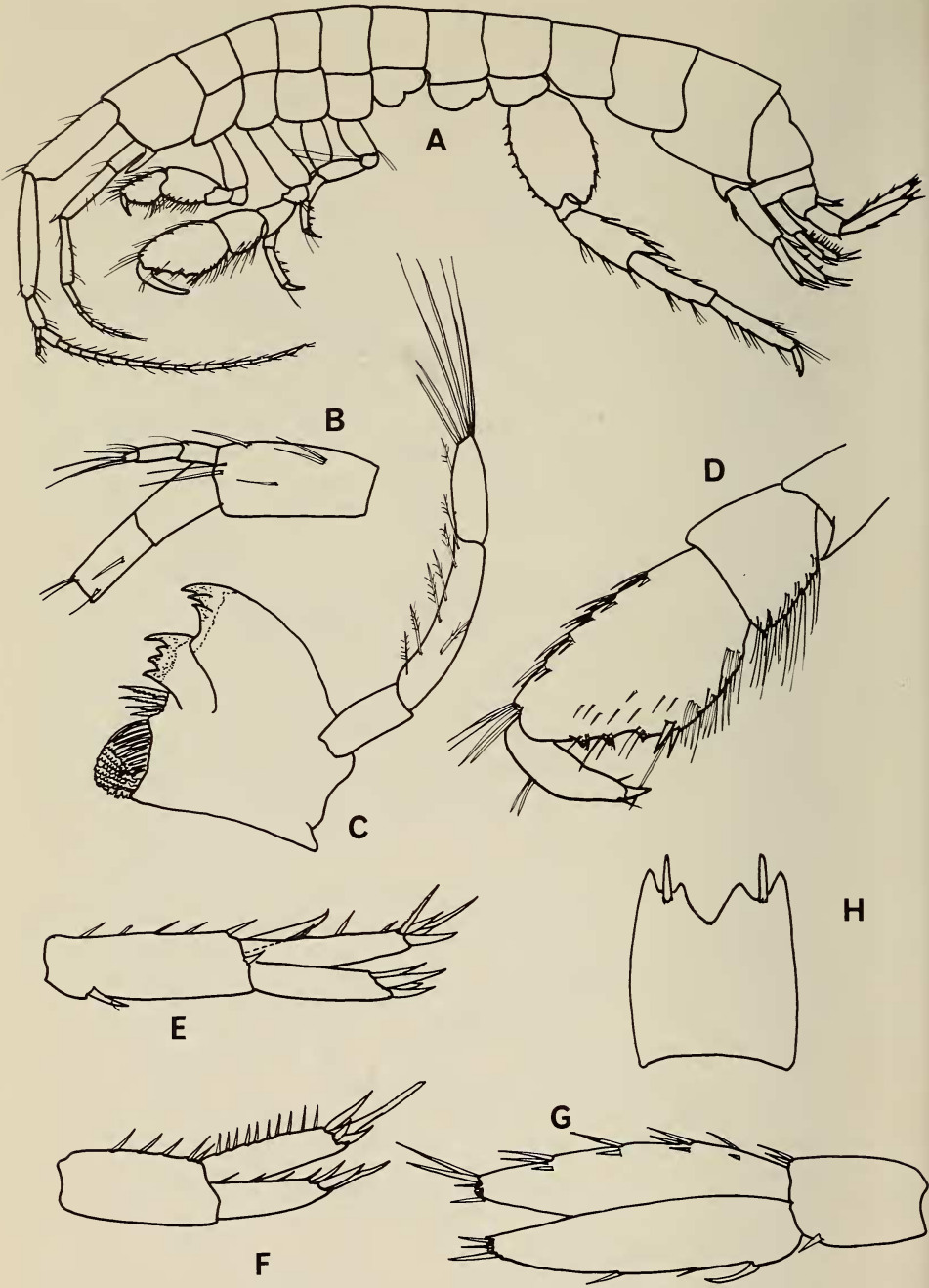


Fig. 8. *Maera emarginata* sp. nov.

Male, 5 mm: A—lateral aspect; B—accessory flagellum; C—mandible; D—articles 5-7 of gnathopod 2; E, F, G—uropods 1, 2, 3; H—telson.

is hardly cleft, most other species having telsons at least 50% cleft. *M. euginiae* Schellenberg also has an incompletely cleft telson but here the apices are strongly divergent. Moreover, in *M. euginiae* the palm of gnathopod 2 ♂ is undefined.

Material: Three specimens from the type locality.

Maera grossimana (Montagu, 1808)

Maera grossimana: Chevreux & Fage, 1925: 239, figs 248, 250. Karaman & Ruffo, 1971: 114, figs 1-3.

Records: 33/17/T, two records.

Distribution: Mediterranean, Atlantic.

Maera hamigera (Haswell, 1880)

Maera hamigera: J. L. Barnard, 1965: 507, fig. 16. Karaman & Ruffo, 1971: 152, figs 21-23.

Records: 32/17/D, 33/18/I, T to 34/18/FB/I, T and 34/19/I, a few records.

Distribution: Indo-Pacific, extending around west coast of South Africa.

Remarks: The form of gnathopod 2 ♂ in this species is highly variable. Males in the present collection show a series of regular teeth along the distal portion of the palm, as figured by K. H. Barnard (1916), while females agree closely with the form figured by Karaman & Ruffo (1971).

Maera hirondellei Chevreux, 1910

Maera hirondellei: K. H. Barnard, 1916: 194. Chevreux & Fage, 1925: 241, fig. 252. Karaman & Ruffo, 1971: 122, figs 4-7.

Records: 33/18/I, 33/17/D, two records.

Distribution: Mediterranean, Atlantic.

Remarks: This species can be distinguished from *M. grossimana* by virtue of its elongate third uropod, which exceeds the apex of uropod 2 by about half the length of its rami.

Maera inaequipis (Costa, 1851)

Maera inaequipis: Karaman & Ruffo, 1971: 143, figs 17-20.

Records: 29/16/I to 34/18/FB/T, O and 34/18/D, abundant.

Distribution: Cosmopolitan in tropical and temperate seas.

Maera komma sp. nov.

Fig. 9

Description of male (7 mm): Head without cheek notch, eyes large (half height of head), composed of 20–30 separate ocelli; antenna 1 as long as pereon plus pleon, article 2 longer than 1, 3 short, flagellum 26-articulate, accessory flagellum of three elongate articles; antenna 2 extending 25% along flagellum of antenna 1, flagellum 12-articulate; mandible (Fig. 9A) with large strongly triturative molar, article 2 of palp slightly longer than 3.

Coxa 1 (Fig. 9B) strongly produced forwards, lower margin with one anterior tooth and two posterior teeth, remaining coxae quadrate; articles 5 and 6 of gnathopod 1 subequal, palm (Fig. 9C) oblique, defined by a single small spine, palmar margin finely pectinate throughout, dactyl subequal to palm; gnathopod 2 (Fig. 9D) strongly subchelate, article 2 anteriorly smooth, 3 not lobed, 5 strongly setose posteriorly, 6 elongate, widest at its base, posterior margin strongly setose proximally, concave distally, palm not defined, dactyl half length of hand, strongly curved so that when closed an oval gap remains between finger and palm; pereopods 1 and 2 slender; article 2 of pereopods 3–5 elongate-oval, posteriorly serrate, distal articles linear.

First pleonal epimeron very small, postero-distally quadrate; second pleonal epimeron much larger than first, postero-distally slightly produced; third pleonal epimeron postero-distally slightly produced, posterior margin with four small serrations, lower margin with five anterior spines; uropods 1 and 2 extending equally, slightly exceeding apex of peduncle of uropod 3; uropod 1 (Fig. 9G) with four pairs of dorsal spines and a strong spine on medial distal margin, inner ramus dorsally smooth, outer with three dorsal spines; outer ramus of uropod 2 marginally shorter than inner; uropod 3 (Fig. 9H) large, rami broad, laminar, margins finely pectinate, weakly spinose; telson (Fig. 9I) 80% cleft, each lobe dorsally bearing two proximal setae and a subterminal seta in a small notch plus a minute terminal seta.

Female: Similar to the male except for shorter third uropods and smaller gnathopod 2 (Fig. 9J) which has an oblique palm defined by four strong spines and minutely pectinate distally.

Holotype: SAM-A13477, male, 7 mm.

Type-locality: 34°05'S/17°45'E, 8 February 1963, depth 142 m, substrate dark green mud.

Relationships: *M. komma* sp. nov. lies close to *M. thrixa* sp. nov. (below) and *M. knudseni* Reid, 1951. However, it may be distinguished from these species by the shape of the palm and dactyl of gnathopod 2 ♂ and, in the case of *M. thrixa*, by the absence of an anterior keel on article 2 of gnathopod 2.

Material: 32/17/D, 34/18/D, two records.

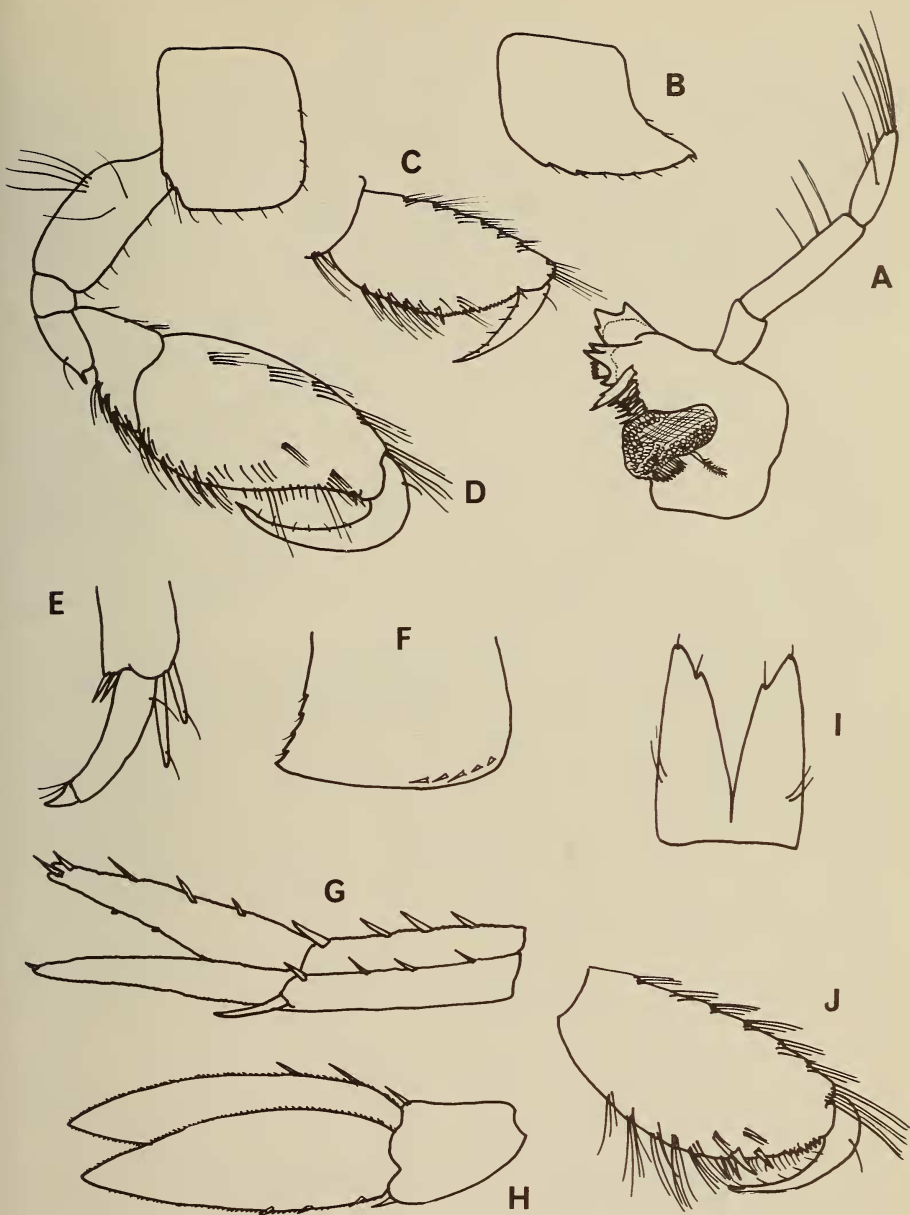


Fig. 9. *Maera komma* sp. nov.

Male, 7 mm: A—mandible; B—coxa 1; C—articles 6 and 7 of gnathopod 1; D—gnathopod 2; E—dactyl of pereopod 5; F—third pleonal epimeron; G, H—uropods 1, 3; I—telson.
 Female, 7 mm: J—articles 6 and 7 of gnathopod 2.

Maera thrixa sp. nov.

Fig. 10

Description of male (9 mm): Head slightly exceeding length of first pereon segment, with a small cheek notch, eyes small, round, black; antenna 1 as long as pereon, article 1 slightly shorter than 2, 3 very short, flagellum 30-articulate, accessory flagellum 4-articulate; antenna 2 reaching 30% along flagellum of antenna 1, article 4 considerably longer than 5, flagellum 11-articulate; mandible with strong triturative molar, article 1 of palp not produced distally (Fig. 10C), articles 2 and 3 subequal.

Coxa 1 not strongly produced forwards, lower margin faintly serrate, remaining coxae sub-quadrate; gnathopod 1 (Fig. 10A) with articles 5 and 6 subequal, palm oblique, defined by two small spines, minutely pectinate throughout, dactyl smooth, subequal to palm; gnathopod 2 (Fig. 10B) powerfully subchelate, anterior margin of article 2 distally produced into a triangular keel, article 3 with an anterior pellucid lobe, article 5 strongly setose posteriorly, article 6 elongate, anterior margin setose, palm not distinct from hind margin, setose, dactyl closely appressed to palm, half length of hand; pereopods 1 and 2 slender; pereopod 3 short, extending only to tip of article 4 of pereopod 4; article 2 of pereopods 4 and 5 elongate-oval, posteriorly serrate, none of distal articles strongly expanded.

First and second pleonal epimera with oblique ridge running to minutely produced postero-distal corner; third pleonal epimeron (Fig. 10E) acutely produced postero-distally, posterior margin with two faint serrations, lower margin not serrate, anteriorly bearing five small spines; urosomites dorsally smooth; uropods 1 and 2 extending to tip of peduncle of uropod 3, rami subequal, weakly spinose dorsally and apically; uropod 3 large, rami elongate-oval (Fig. 10F), weakly spinose; telson (Fig. 10G) longer than peduncle of uropod 3, 80% cleft, each lobe with two dorsal setae, a sub-apical spine in a small notch and two minute apical setae.

Female: Similar to male except for smaller second gnathopod (Fig. 10H) which has smooth article 2 and oblique palm lined with strong spines.

Holotype: SAM-A13230, male, 9 mm.

Type-locality: 34°18'S/18°48'E, 18 February 1965, depth 51 m, substrate coarse shelly sand and rock.

Relationships: This species falls into a group typified by *M. knudseni* Reid and *M. othonis* (Milne-Edwards). The anterior keel on article 2 of gnathopod 2 is not, however, found in other members of the group. This keel appears in specimens of about 7 mm and in fully adult males (9–12 mm) becomes extremely prominent, reaching a maximum width about 1,5 times that of the body of article 2 of gnathopod 2.

Material: 34/18/FB/T, O, several records.

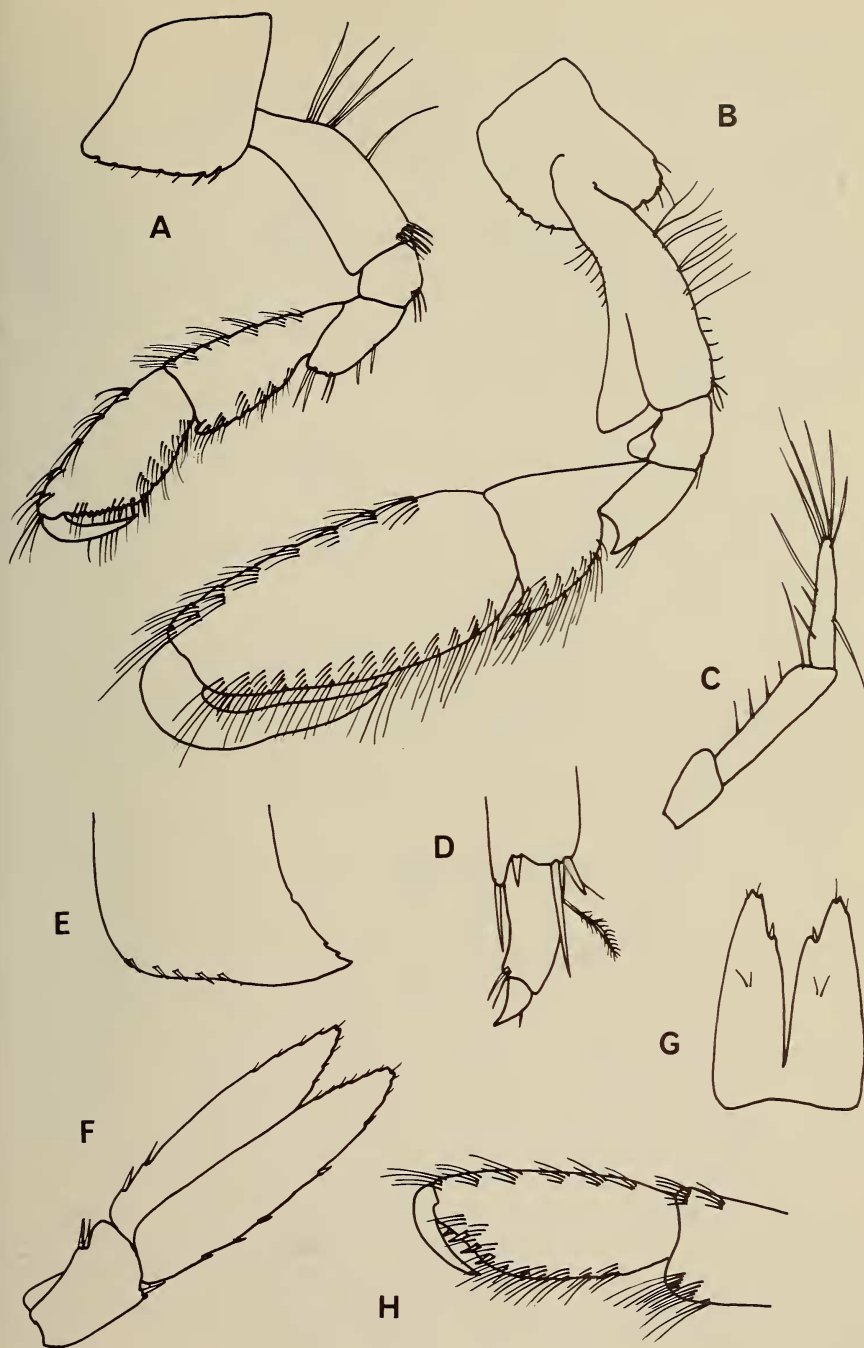


Fig. 10. *Maera thrixa* n. sp.

Male, 9 mm: A—gnathopod 1; B—gnathopod 2; C—mandibular palp; D—dactyl of pereopod 5; E—third pleonal epimeron; F—uropod 3; G—telson. Female, 10 mm: H—articles 6 and 7 of gnathopod 2.

Maera vagans K. H. Barnard, 1940

Elasmopus laevis K. H. Barnard, 1916: 200, pl. 27 (fig. 15).

Maera vagans K. H. Barnard, 1940: 459.

Records: 31/17/I to 34/18/FB/T, O, fairly common.

Distribution: Endemic, False Bay to Lüderitz.

Megaluropus agilis Hoek, 1889

Phylloropus capensis K. H. Barnard, 1932: 146, figs 84–85.

Megaluropus agilis: Pillai, 1957: 50, fig. 10.

Records: 33/18/I, T, 34/18/FB/T, O, a few records.

Distribution: Europe, India, South Africa.

Megaluropus namaquaeensis Schellenberg, 1953

Megaluropus namaquaeensis Schellenberg, 1953: 117, fig. 5.

Records: 32/18/T, O to 34/18/FB/T, O, abundant.

Distribution: Endemic, Natal to South West Africa.

Melita machaera K. H. Barnard, 1955

Melita machaera K. H. Barnard, 1955: 90–92, fig. 45.

Records: 33/18/I, T, 34/18/FB/T, O, a few records.

Distribution: Endemic, Plettenberg Bay to Saldanha Bay.

Melita mucronata sp. nov.

Fig. 11

Description of female (4,5 mm): Head equal to first two pereon segments, eyes round, brown (as preserved in 70% alcohol); antenna 1 almost as long as body, article 1 slightly shorter than 2, 3 short, flagellum of 29 elongate articles, accessory flagellum of three long articles and one short article; antenna 2 shorter than 1, peduncle longer than that of antenna 1, flagellum 11-articulate; mandible (Fig. 11B) with incisor of three strong teeth, lacinia mobilis bifurcate, spine row of nine spines, molar quadrate, articles 2 and 3 of palp subequal, much longer than 1; inner plate of maxilla 2 strongly setose medially.

Coxae 1–4 quadrate, subequal, postero-distal corners minutely toothed; gnathopod 1 with articles 5 and 6 subequal, palm oblique, dactyl equal to palm; gnathopod 2 (Fig. 11C) larger than 1, article 4 postero-distally acutely produced, 5 slightly shorter than 6, palm oblique, defined by a single spine, dactyl slightly longer than palm, inner margin faintly crenulate; pereopods 1 and 2 slender, dactyl with strong anterior accessory cusp; (pereopods 3–5 missing).

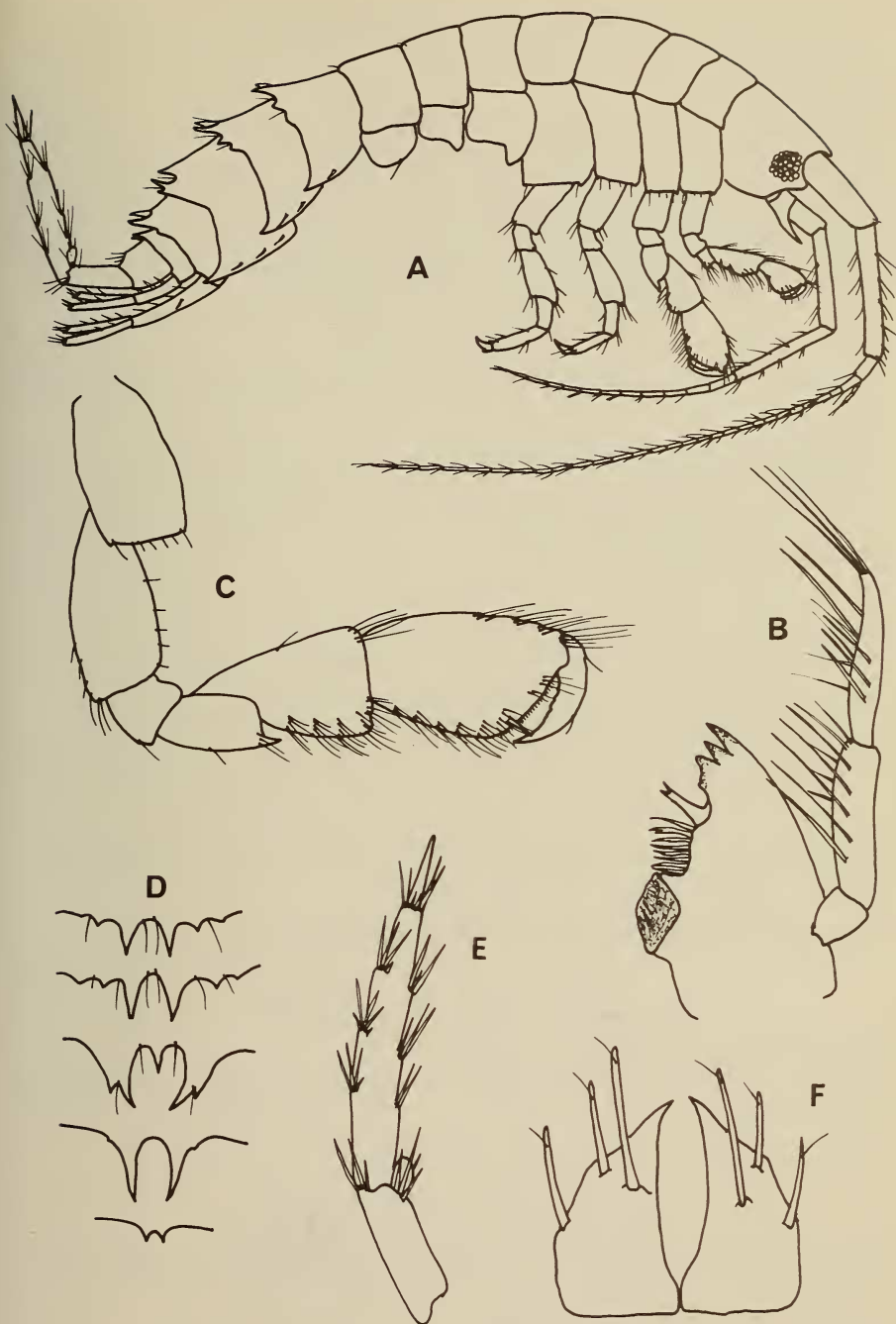


Fig. 11. *Melita mucronata* sp. nov.
 Female, 4,5 mm: A—lateral aspect; B—mandible; C—gnathopod 2; D—dorsal margins of pleon segments 1-5; E—uropod 3; F—telson.

Pleonal tooth formula 4 : 6 : 5 : 2 : 2 (Fig. 11D) with a suggestion of a third pair of teeth on pleon segment 1; pleonal epimera 1–3 acutely produced postero-distally, distal margins with 1, 2 and 3 spines respectively; uropods 1 and 2 extending equally, peduncles and rami dorsally spinose, apices of rami truncated, surrounded by rings of slender spines; uropod 3 (Fig. 11E) greatly exceeding 1 and 2, inner ramus about 10% length of outer, bearing a single apical spine, outer ramus with small spiniform article 2, article 1 with three lateral fascicles of spines on each side and a terminal fascicle of spines surrounding base of article 2; telson (Fig. 11F) cleft to base, each lobe with a medio dorsal and two lateral strong spines, apices of lobes acute.

Holotype: SAM-A13233, female, 4.5 mm, unique.

Type-locality: 34°21'S/18°41'E, 22 February 1965, depth 85 m, substrate fine green mud.

Relationships: The pleonal tooth formula of this species is diagnostic. Similar formulae are those of *M. dentata* (Kröyer) and *M. gladiosa* Bate, which have a central tooth on pleon segments 4 and 5, and *M. pallida* Sars which lacks a central tooth on pleon segment 3.

Melita orgasmos K. H. Barnard, 1940

Melita orgasmos K. H. Barnard, 1940: 454. Sivaprakasam, 1966: 114, fig. 12k–m.

Records: 29/16/I to 34/19/I, a few records, mostly intertidal.

Distribution: India, southern Africa.

Melita subchelata (Schellenberg, 1925)

Melita fresnelii var. *subchelata* Schellenberg, 1925: 153. K. H. Barnard, 1932: 211, fig. 130.

Records: 32/18/T, 33/17/T, O, a few records.

Distribution: Endemic, Saldanha Bay to South West Africa.

Melita zeylanica Stebbing, 1904

Melita zeylanica: J. L. Barnard, 1972a: 235, figs 139–141.

Records: 33/18/I and 31/18/E to 34/19/E, common in estuaries and areas of lowered salinity.

Distribution: Indo-Pacific, a brack-water species.

Pareiasmopus suluensis (Dana, 1853)

Pareiasmopus suluensis: Stebbing, 1888: 1029, pl. 100. Ledoyer, 1972a: 233, pls 48–49. Griffiths, 1974c: 292.

Records: 34/18/FB/T, a single record.

Distribution: Indo-Pacific.

Quadrivisio aviceps (K. H. Barnard, 1940)

Ceradocus aviceps K. H. Barnard, 1940: 456, fig. 25.

Records: 34/19/E, a few records.

Diagnosis: None of pereon or pleon segments dorsally dentate; gnathopod 2 ♂ with article 6 elongate-oval, distally scabrous, dactyl very short and strongly hooked, closing inwards against inner surface of hand; pleonal epimera 1-3 weakly crenulate posteriorly, minutely produced postero-distally; rami of uropod 3 elongate-oval, apically rounded, setose ventrally and distally; telson cleft to base, apices notched with a single spine within notch.

Distribution: Endemic to estuaries in the Hermanus district.

Remarks: A re-examination of the existing material of this species has shown article 1 of the mandibular palp to be distally rounded and article 3 to be almost as long as 2. These characters are inconsistent with the definition of *Ceradocus* and *C. aviceps* should be removed from that genus to *Quadrivisio* Stebbing, 1907. Members of this genus resemble '*C.*' *aviceps* closely in the foliaceous condition of the rami of uropod 3 and in their estuarine habits. As originally defined *Quadrivisio* showed two pairs of eyes, but this has been shown to be a variable character (Schoemaker 1933), the eyes in fact developing from oval to dumbbell-shaped and then separating into two portions. In the present species the eyes are distinctly bilobed although the two halves are still connected even in the largest known specimens.

Q. aviceps differs from other species of *Quadrivisio* in the unusual condition of gnathopod 2 ♂, in which the stunted dactyl closes medially against the inner surface of the hand, rather than longitudinally against the palmar margin.

Family **Haustoriidae***Bathyporeia* sp.

Bathyporeia gracilis (non Sars, 1891): K. H. Barnard, 1951: 704.

Bathyporeia sp.: Vader, 1970: 161.

Records: 32/18/T, O to 34/18/FB/I, T, O, numerous records.

Distribution: Endemic, eastern Cape Province to South West Africa.

Remarks: These specimens were sent to Dr Wim Vader, who is to describe a new species from them.

Cunicus profundus Griffiths, 1974

Cunicus profundus Griffiths, 1974c: 293-297, figs 8-9.

Records: 32/18/T, 34/18/D, 34/18/FB/O, abundant locally.

Distribution: Endemic, Port Elizabeth to Lambert's Bay.

Remarks: This species appears to be an extremely efficient burrower. Although

rarely collected by conventional methods it has been recovered in considerable numbers by a diver-operated suction-sampler which extracts sand samples of 60 cm depth and more.

Urothoe coxalis Griffiths, 1974

Urothoe coxalis Griffiths, 1974b: 239, fig. 5.

Records: 32/17/O, a single record.

Distribution: Endemic, Natal to Saldanha Bay.

Remarks: *U. coxalis* is closely related to *U. cuspis* Imbach (1967), a description of which I have only recently been able to obtain. The two species may be distinguished by the presence of an antero-distal cusp on coxa 2 of *U. cuspis* and the elongate posteriorly-directed process of coxa 4 of *U. coxalis*.

Urothoe elegans Bate, 1857

Urothoe elegans: Chevreux & Fage, 1925: 101, fig. 95.

Records: 32/17/D, 33/18/I, T to 34/18/FB/I, T, O, numerous records.

Distribution: Atlantic, Indian Ocean.

Urothoe grimaldi Chevreux, 1895

Urothoe grimaldii: Chevreux & Fage, 1925: 99, fig. 93. K. H. Barnard, 1955: 84, fig. 41B.

Records: 32/18/T, O, 32/17/D to 34/18/FB/T, O, one of the most abundant species found in sandy sediments.

Distribution: Mediterranean, Atlantic, Indian Ocean.

Urothoe pinnata K. H. Barnard, 1955

Urothoe pinnata K. H. Barnard, 1955: 86, fig. 42.

Records: 34/18/FB/T, O, fairly common.

Distribution: Endemic, Natal to False Bay.

Urothoe pulchella (Costa, 1853)

Urothoe pulchella: Chevreux & Fage, 1925: 99, fig. 92. K. H. Barnard, 1955: 83, fig. 41A.

Records: 32/18/T, 32/17/D to 34/18/FB/T, O, numerous records.

Distribution: Mediterranean, Atlantic, South Africa.

Urothoe tumorosa Griffiths, 1974

Urothoe tumorosa Griffiths, 1974b: 241, fig. 6.

Records: 34/18/FB/T, O, a few records.

Distribution: Endemic, Natal to False Bay.

Family **Ischyroceridae***Cerapus tubularis* Say, 1818

Cerapus tubularis: J. L. Barnard, 1962a: 61, figs 27–28. Bousfield, 1973: 197, pl. 60 (fig. 1).

Records: 33/18/O, 34/18/FB/T, O, a few records.

Distribution: Cosmopolitan in tropical and temperate seas.

Ericthonius brasiliensis (Dana, 1853)

Ericthonius brasiliensis: J. L. Barnard, 1971: 61, fig. 17E. Bousfield, 1973: 195, pl. 59 (fig. 2).

Records: 31/18/E, 32/18/T to 34/18/FB/T, O, numerous records.

Distribution: Cosmopolitan in tropical and temperate seas.

Isaeopsis tenax K. H. Barnard, 1916

Isaeopsis tenax K. H. Barnard, 1916: 267, pl. 28 (figs 19–21).

Records: 33/18/I, 34/18/I, two records.

Diagnosis: Accessory flagellum of a single elongate article; coxae serially touching, 1 about 75% length of 2, 6 half as long as 5; articles 5 and 6 of gnathopod 1 subequal; gnathopod 2 ♂, palm lacking defining tooth (resembling that of *Ischyrocerus anguipes*); pereopods prehensile, article 2 widened.

Distribution: Endemic, known only from the above records.

Ischyrocerus anguipes Kröyer, 1835

Ischyrocerus anguipes: Bousfield, 1973: 192, pl. 58 (fig. 1).

Records: 33/18/T, O to 34/18/FB/I, T, O, fairly common.

Distribution: Cosmopolitan in tropical and temperate seas.

Ischyrocerus carinatus K. H. Barnard, 1916

Ischyrocerus carinatus K. H. Barnard, 1916: 266, pl. 28 (fig. 18).

Records: 33/18/I, 34/18/FB/I, T, a few records.

Distribution: Endemic, False Bay to South West Africa.

Ischyrocerus ctenophorus Schellenberg, 1953

Fig. 12

Ischyrocerus ctenophorus Schellenberg, 1953: 121, fig. 7.

Records: 34/18/FB/I, a single record.

Distribution: Endemic, False Bay to Lüderitz.

Remarks: The above record is the first of a male of this species and only the second of a female. The female is identical with that figured by Schellenberg. Gnathopod 1 of the male is similar to that of the female while gnathopod 2 (Fig. 12D) is much larger and of typical *Ischyrocerus* type. *I. ctenophorus* is distinguished from other members of the genus by the large dorsal teeth on the outer ramus of uropod 3 (Fig. 12H) and by the comb-like rows of setae along the lateral margins of the dactyls of gnathopods 1 and 2 in both sexes.

Ischyrocerus gorgoniae K. H. Barnard, 1940

Ischyrocerus gorgoniae K. H. Barnard, 1940: 481, fig. 35.

Records: 34/18/FB/T, a few records.

Diagnosis: Pereon segments 1–6 each medio-dorsally carinate; article 2 of gnathopod 2 ♂ long and slender, margins entire, article 6 elongate-oval, palm straight with a narrow elongate tooth near hinge, dactyl laterally compressed; inner ramus of uropod 3 slightly the shorter, bearing a small apical spine, outer ramus with a large apical spine and two large dorsal teeth.

Distribution: Endemic, known only from the above records.

Jassa falcata Montagu, 1808

Jassa falcata: Sexton & Reid, 1951: 30–47, pls 4–30. Bousfield, 1973: 190, pl. 58 (fig. 2).

Records: 32/18/T, O, D to 34/18/FB/I, T, numerous records.

Distribution: Cosmopolitan.

Parajassa chikoa Griffiths, 1974

Parajassa chikoa Griffiths, 1974c: 300, fig. 11.

Records: 34/18/FB/O, a few records.

Distribution: Endemic, Cape St. Francis to False Bay.

Ventojassa frequens (Chilton, 1883)

Jassa frequens: Schellenberg, 1953: 119, fig. 6. Griffiths, 1974a: 196.

Ventojassa frequens: J. L. Barnard, 1972b: 135, figs 74–75.

Records: 34/18/FB/T, O, two records.

Distribution: New Zealand, southern Africa.

Remarks: The genus *Ventojassa*, as created by J. L. Barnard (1972b), differs

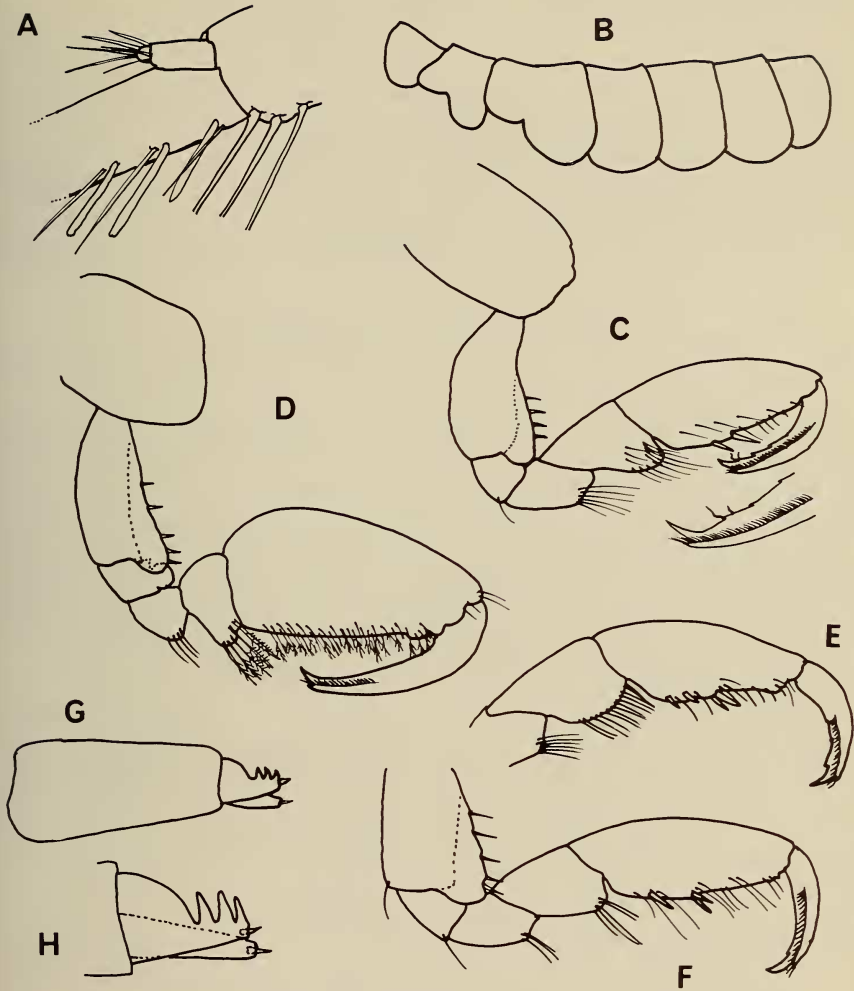


Fig. 12. *Ischyrocerus ctenophorus* Schellenberg, 1953
 Male, 4 mm: A—accessory flagellum; B—coxae 1-7; C—gnathopod 1 with tip of dactyl enlarged; D—gnathopod 2. Female, 3,5 mm: E, F—gnathopods 1, 2; G—uropod 3; H—rami of uropod 3 enlarged.

from *Jassa* in the form of uropod 3, the dorsal ornamentation of the outer ramus consisting of one or more wire-like setae, rather than the one to three sharp reverted cusps typical of *Jassa*.

Family Leucothoidae

Leucothoe ctenochir K. H. Barnard, 1925

Leucothoe ctenochir K. H. Barnard, 1925: 342, pl. 34 (fig. 8).

Records: 34/18/T, 34/18/FB/T, O, a few records.

Distribution: Endemic, Durban to Cape Peninsula.

Leucothoe dentitelson Chevreux, 1925

Leucothoe dentitelson Chevreux, 1925: 297, figs 7-8. Reid, 1951: 227, fig. 25.

Records: 33/18/T, two records.

Diagnosis: Antennae short, extending only to pereon segment 2; article 7 of gnathopod 1 about 20% length of article 6; gnathopod 2 quite different in the two sexes, that of ♂ large, article 5 apically serrate, palm oblique, nodulose proximally, distally bearing four fairly large flat-topped teeth; gnathopod 2 ♀ smaller, article 5 apically crenulate, 6 antero-distally produced over base of dactyl, process acute, setose, palm slightly oblique, finely nodulose, defining angle almost rectangular, dactyl very stout; second pleonal epimeron acutely produced; third pleonal epimeron with a notch above a postero-distal tooth, posterior margin sinuous.

Distribution: Senegal, west coast of South Africa.

Remarks: This species has not previously been recorded from southern Africa.

Leucothoe dolichoceras K. H. Barnard, 1916

Leucothoe dolichoceras K. H. Barnard, 1916: 157, pl. 26 (fig. 14); 1925: 343.

Records: 33/17/T, O, 33/18/FB/T, O, a few records.

Distribution: Endemic, Natal to Saldanha Bay.

Leucothoe richiardi Lessona, 1865

Leucothoe richiardi: Sivaprakasam, 1967: 385, fig. 2.

Records: 32/18/T, 32/17/D to 34/18/FB/I, T, O, numerous records.

Distribution: Mediterranean, India, South Africa.

Leucothoe spinicarpa (Abildgaard, 1789)

Leucothoe spinicarpa: Sivaprakasam, 1967: 384, fig. 1.

Records: 33/18/T to 34/18/FB/T, O and 35/18/D, a few records.

Distribution: Cosmopolitan.

Family **Liljeborgiidae***Liljeborgia dubia* (Haswell, 1880)

Eusirus dubius Haswell, 1880: 331, pl. 30 (fig. 3).

Records: 33/17/O, 34/18/FB/T, O, a few records.

Distribution: Indo-Pacific.

Liljeborgia epistomata K. H. Barnard, 1932

Liljeborgia epistomata K. H. Barnard, 1932: 114, fig. 83; 1955: 89, fig. 44.

Records: 31/18/O, 32/17/D to 34/18/FB/T, O, numerous records.

Distribution: Endemic, Natal to Lambert's Bay.

Liljeborgia kinahani (Bate, 1862)

Liljeborgia kinahani: Chevreux & Fage, 1925: 157, fig. 157.

Records: 34/18/D, 34/18/FB/T, O, a few records.

Distribution: North Atlantic, South Africa.

Liljeborgia palmata Griffiths, 1974

Liljeborgia palmata Griffiths 1974c: 304, fig. 12.

Records: 32/17/D, 32/16/D to 34/18/D, a few records.

Distribution: Endemic, Still Bay to Lambert's Bay.

Liljeborgia proxima Chevreux, 1908

Liljeborgia proxima Chevreux, 1908: 475, figs 4-5.

Records: 34/18/FB/T, a single record.

Diagnosis: Palm of gnathopod 2 ♂ smoothly convex; pleon segments 1, 2 and 4 each bearing a single medio-dorsal tooth, segments 3 and 5 dorsally smooth.

Distribution: Atlantic coast of Africa.

Listriella lindae Griffiths, 1974

Listriella lindae Griffiths, 1974a: 197, fig. 7.

Records: 32/18/O, a single record.

Distribution: Endemic, Lambert's Bay to South West Africa.

Listriella saldanha sp. nov.

Fig. 13

Description of male (8 mm): Head as long as 1.5 pereon segments, eyes round, black; antenna 1 half as long as 2, flagellum 9-articulate, accessory flagellum (Fig. 13B) 3-articulate; antenna 2 extending to pereon segment 5, flagellum 8-articulate; mandible (Fig. 13C) with incisor cut into five strong teeth, lacinia mobilis of five teeth, spine row of nine spines, molar represented by five setae,

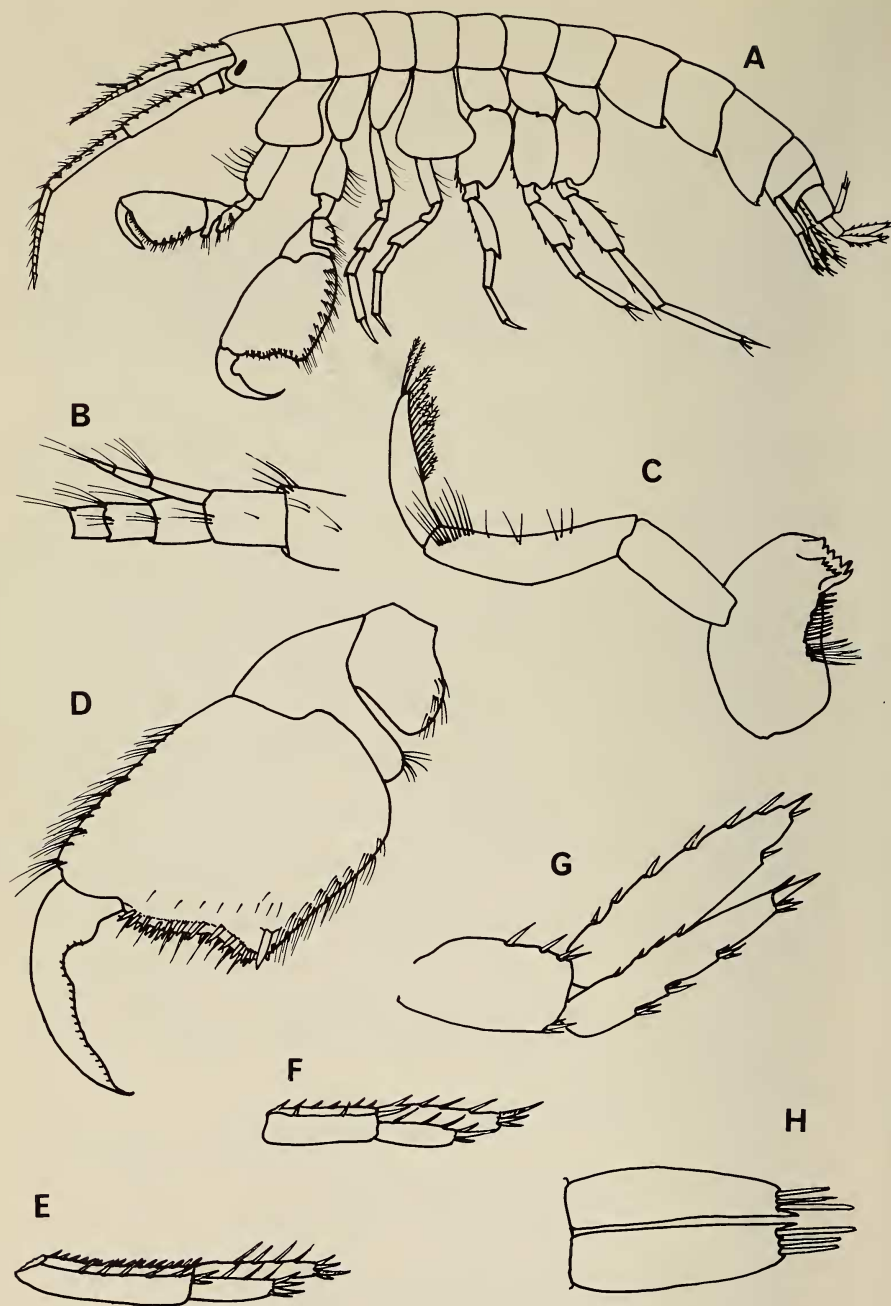


Fig. 13. *Listriella saldanha* sp. nov.

Male, 8 mm: A—lateral aspect; B—accessory flagellum; C—mandible; D—articles 4-7 of gnathopod 2; E, F, G—uropods 1, 2, 3; H—telson.

palp 3-articulate, article 3 lined with plumose setae; inner plate of maxilla 1 terminating in a single seta, outer plate bearing about eight pectinate spines, palp bi-articulate, with two terminal spines and a double row of setae along distal margin.

Coxae 1–4 without distal teeth, 1 slightly produced forwards; gnathopod 1 subchelate, considerably smaller than 2, palm slightly oblique, evenly convex, lined by alternating setae and spines; gnathopod 2 (Fig. 13D) powerful, palm sinuous, almost transverse, defined by a large spine and with a row of short spines on either side of its setose margin, dactyl indistinctly serrate throughout, excavate near its base; pereopods 1 and 2 slender, pereopods 3–5 successively longer.

Pleonal epimera 1–3 each postero-distally produced into a small tooth, posterior margins entire; urosome segments dorsally smooth; uropods 1 and 2 (Fig. 13E–F) extending equally; peduncle of uropod 1 with a medio-dorsal row of about 20 close-packed spines, outer margin with about six more widely spaced spines, outer ramus slightly the shorter, both rami dorsally and apically spinose, longest terminal spine of each ramus striated; uropod 3 (Fig. 13G) reaching well beyond apices of 1 and 2, outer ramus with a minute second article; telson (Fig. 13H) cleft to base, each lobe truncated distally with a medio-distal tooth and three strong terminal setae.

Female: The accessory flagellum of the only ♀ recorded to date is 4-articulate, as opposed to 3-articulate in the ♂. The palm of gnathopod 2 ♀ is transverse but not sinuous as in the ♂, also the telsonic apices each bear four rather than three setae.

Holotype: SAM-A13227, male, 8 mm.

Type-locality: 33°01'S/17°58'E, 2 May 1972, depth 12 m, substrate sand.

Relationships: All representatives of this genus with the exception of the three southern African species, *L. lindae* Griffiths, *L. sinuosa* Griffiths and *L. saldanha* sp. nov. have bi-articulate accessory flagellae. *L. saldanha* can be distinguished from the other two local species by virtue of the transverse palm of the second gnathopod and the shape of the third pleonal epimeron.

Material: 33/18/T, 34/18/FB/O, a few records.

Family Lysianassidae

Acidostoma obesum (Bate, 1862)

Acidostoma obesum: K. H. Barnard, 1925: 322. Chevreux & Fage, 1925: 32, fig. 9.

Records: 33/17/D, a single record.

Diagnosis: Antenna 1 ♂ very stout; mouthparts forming a conical bundle; mandibular palp attached proximal to the weak molar; gnathopod 1 simple; gnathopod 2 lacking dactyl; pereopods 3–5 very stout, articles 4 and 5 as wide as long; uropod 3 very short, extending only to middle of rami of uropod 2; telson 50% cleft.

Distribution: North and South Atlantic.

Amaryllis macrophthalma Haswell, 1880

Amaryllis macrophthalma: J. L. Barnard, 1972a: 262-269, figs 156-158.

Records: 29/16/I, 32/18/T, 32/17/O, D to 34/18/FB/I, T, O and 34/19/I, one of the most abundant species in the area.

Distribution: Southern hemisphere.

Aristias symbiotica K. H. Barnard, 1916

Aristias symbiotica K. H. Barnard, 1916: 122.

Records: 32/18/I, T, 32/17/D to 34/18/I, D, 34/18/FB/T, O, fairly common.

Distribution: Endemic, Moçambique to South West Africa.

Cyphocaris anonyx Boeck, 1871

Cyphocaris anonyx: Schellenberg 1926b: 210, figs 2b, 5a-b, pl. 5 (fig. 2).

Records: 34/16/VD, a single record.

Diagnosis: Pereon segment 1 overhanging head, not produced into a 'horn'; article 2 of pereopod 3 postero-distally produced to tip of article 5, both margins of process strongly serrate.

Distribution: Cosmopolitan, bathypelagic.

Cyphocaris challengerii Stebbing, 1888

Cyphocaris challengerii Stebbing, 1888: 661, pl. 17.

Records: 34/16/VD, a single record.

Distribution: Cosmopolitan, bathypelagic.

Cyphocaris richardi Chevreux, 1905

Cyphocaris richardi: J. L. Barnard, 1954: 53, pls 2-3.

Records: 33/15/VD, 34/16/VD, two records.

Diagnosis: Pereon segment 1 of adult overhanging head and anteriorly produced into an elongate, forward-projecting 'horn'; article 2 of pereopod 3 not greatly produced postero-distally, posterior margin with about 10 strong serrations.

Distribution: Cosmopolitan, bathypelagic.

Euonyx biscayensis Chevreux, 1908

Euonyx biscayensis: K. H. Barnard, 1916: 110, J. L. Barnard, 1961: 34, fig. 4.

Records: 35/18/VD, a single record.

Diagnosis: Article 1 of antenna 1 slender, linear; eyes weak or absent; gnathopod 1 distinctly chelate, chela about 40% length of hand; article 6 of gnathopod 2 half as long as 5; third pleonal epimeron quadrate; dorsal surface of pleon segment 4 with basal depression and rounded distal hump.

Distribution: Mediterranean, eastern Atlantic, East Africa.

Euonyx conicurus K. H. Barnard, 1955

Euonyx conicurus K. H. Barnard, 1955: 80, fig. 38.

Records: 34/18/FB/T, a few records.

Distribution: Endemic, Port Elizabeth to False Bay.

Eurythenes obesus (Chevreux, 1905)

Katius obesus: K. H. Barnard, 1932: 56–58, fig. 21, pl. 1 (fig. 1).

Eurythenes gryllus: K. H. Barnard, 1940: 440.

Eurythenes obesus: J. L. Barnard, 1961: 38, fig. 8.

Records: 33–34/15–16/VD, a single record.

Diagnosis: Coxa 1 much smaller than 2 and partially concealed by it; gnathopod 1 subchelate, article 6 twice as long as 5; gnathopod 2 subchelate, article 6 half as long as 5; article 2 of pereopod 3 very small, 20% or less of length of limb; dactyl of pereopods 3–5 large, over 50% length of article 6.

Distribution: Cosmopolitan in tropical and temperate seas.

Hippomedon longimanus (Stebbing, 1888) *new synonymy*

Platamon longimanus Stebbing, 1888: 643, pl. 13.

Hippomedon longimanus: K. H. Barnard, 1916: 125.

Tryphosa africana K. H. Barnard, 1955: 81.

Tryphosella africana: Griffiths, 1974c: 315.

Records: 32/18/T, O, 32/17/D to 34/18/FB/T, O, one of the most abundant species in this area.

Distribution: Atlantic, South African east coast.

Remarks: In the past both K. H. Barnard and I have designated specimens to either *Hippomedon longimanus* or *Tryphosella* (= *Tryphosa*) *africana* on the basis of the length of the postero-distal tooth of the third pleonal epimeron. However, as more material has become available, this situation has become untenable, since a continuous range of variation in the size of this process has been found to occur. Other than this feature, the description of *Tryphosa africana* in Barnard (1955) applies equally well to *Hippomedon longimanus*. Unfortunately Barnard failed to allocate a holotype of *Tryphosa africana*, but he based his brief description on specimens in my possession and which are apparently identical with those of *Hippomedon longimanus* from the same area.

The composite species formed by the amalgamation of the above forms is definitely a *Hippomedon* rather than a *Tryphosella* since the mandibular molar is ridged and unsetulose, the dactyl of gnathopod 1 simple, the inner ramus of uropod 2 unstricted and the branchiae complete with accessory lobes.

Hippomedon normalis (K. H. Barnard, 1955) *new synonymy*

Tryphosa normalis K. H. Barnard, 1955: 80, fig. 39.

Tryphosella normalis: Griffiths, 1974a: 201; 1974b: 249; 1974c: 315.

Hippomedon rotundipleura Ledoyer, 1973: 75, pl. 19.

Records: 33/18/I, T, O, to 34/18/FB/T, O, numerous records.

Distribution: Madagascar, South Africa.

Remarks: Barnard's incorrect placement of '*Tryphosa africana*' (above) has prompted a re-examination of the taxonomic status of his other '*Tryphosa*'—*T. normalis*. This species also appears to be a *Hippomedon* for the same reasons as given for '*Tryphosa africana*'.

A survey of the literature of *Hippomedon* has shown that the same species described by Barnard as *Tryphosa normalis* has subsequently been redescribed as a *Hippomedon*—*H. rotundipleura*—by Ledoyer (1973). His figures (which are of a ♀, not a ♂) agree closely with females in my possession (gnathopods 1 and 2 are transposed in Ledoyer's figures), the only notable difference being that my specimens have an accessory flagellum of five articles and a few fine setae along the dorsal margins of the rami uropod 3. Male specimens differ from females in the length of antenna 1, which is usually as long as the body, and in the more strongly setose margins of the rami of uropod 3.

Hippomedon onconotus (Stebbing, 1908)

Tryphosa onconotus Stebbing, 1908b: 65, pl. 35.

Hippomedon onconotus: J. L. Barnard, 1962c: 29.

Records: 32/17/D, 32/16/D to 34/18/FB/T, O, 35/18/VD, numerous records.

Distribution: Endemic, Natal to Lambert's Bay.

Lepidepecreum clypeatum Chevreux, 1888

Fig. 14

Lepidepecreum clypeatum: Chevreux, 1900: 28, pl. 4 (fig. 2). Chevreux & Fage, 1925: 63, fig. 52.

Records: 34/18/FB/O, a single record.

Diagnosis: Articles 1 and 2 of antenna 1 dorsally carinate and produced (Fig. 14A), accessory flagellum absent; eyes lacking; article 2 of pereopod 5 greatly elongate (Fig. 14G), postero-distally produced to tip of article 5; pereon segments dorsally smooth; pleon segment 3 postero-dorsally raised into an acute tooth, segment 4 with a triangular dorsal carina; third pleonal epimeron with an oblique ridge running to acutely produced postero-distal corner.

Distribution: North Atlantic, South Africa.

Remarks: The above record is the first of a male of this species and the first of *L. clypeatum* from the Southern hemisphere. As can be seen from the figure the material agrees closely with the females described and figured by Chevreux (1900) and Chevreux & Fage (1925) except for such obviously sexually dimorphic characters as antenna 2 and uropod 3.

Lepidepecreum clypodentatum J. L. Barnard, 1962

Lepidepecreum clypodentatum J. L. Barnard, 1962c: 27, figs 9–10.

Records: 33/17/D, a single record.

Diagnosis: Article 1 of antenna 1 dorsally carinate and produced, accessory

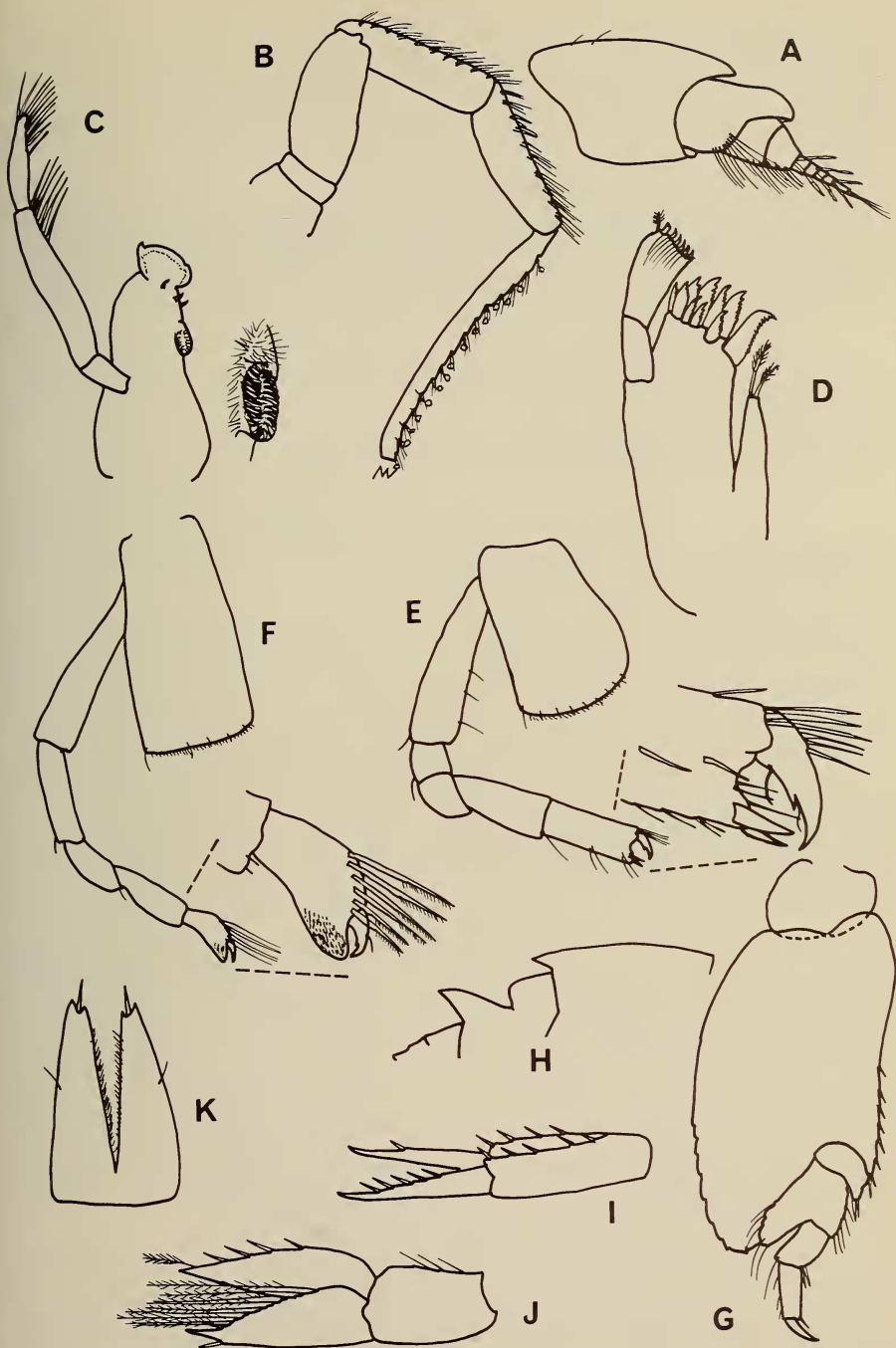


Fig. 14. *Lepidepecreum clypeatum* Chevreux, 1888

Male, 5 mm: A—antenna 1; B—antenna 2; C—mandible with molar enlarged; D—maxilla 1; E—gnathopod 1 with palm enlarged; F—gnathopod 2 with articles 6 and 7 enlarged; G—pereopod 5; H—profile of pleon segments 3-5; I, J—uropods 1, 3; K—telson.

flagellum of two or three minute articles; eyes absent; article 2 of pereopod 5 greatly elongate, postero-distally produced to tip of article 5; pereon segments dorsally ridged; pleon segments 1-3 each postero-dorsally produced into an acute tooth, segment 4 with an erect hook-like dorsal process; third pleonal epimeron postero-distally quadrate, without oblique ridge.

Distribution: West coast of South Africa.

Remarks: The above record is the first of a female of this species and the only record other than that of J. L. Barnard (1962c). The single specimen differs from Barnard's male only in regard to sexual characters of antenna 1 and uropod 3.

Lepidepecreum twalae Griffiths, 1974

Lepidepecreum twalae Griffiths, 1974c: 310, fig. 14.

Records: 32/17/D, a single record.

Distribution: Endemic, Mossel Bay to Lambert's Bay.

Lysianassa ceratina (Walker, 1889)

Lysianassa cubensis: K. H. Barnard, 1916: 120.

Lysianassa ceratina: Chevreux & Fage, 1925: 42, fig. 23.

Records: 29/16/I, 32/18/I, T, O to 34/18/FB/I, T, O, where it is one of the most abundant shallow-water species.

Distribution: Atlantic, Indian Ocean, Mediterranean.

Lysianassa variegata (Stimpson, 1855)

Lysianassa variegata: Stebbing, 1888: 682, pl. 23.

Records: 32/18/O, D to 34/18/FB/T, O, abundant.

Distribution: Africa south of the equator.

Microlysias

The genus *Microlysias* was originally instituted by Stebbing (1918) for his *M. xenoceras* from Durban Bay. Although his description was fully figured he failed to illustrate structure of the epistome and upper lip. K. H. Barnard (1937) subsequently erected a second species, *M. indica*, said to differ from *M. xenoceras* in the shape of the epistome and upper lip. However, Barnard, who did not have access to Stebbing's types, based his concept of the mouth parts of *M. xenoceras* on specimens he himself collected and identified (reported K. H. Barnard 1940), Griffiths (1973) later identified and figured further specimens of '*M. indica*', using Barnard's (1937) figures as a basis for identification.

A recent examination of Barnard's (1940) '*M. xenoceras*' from Plettenberg Bay by the author has revealed that they in fact represent *Orchomene plicata* and not *Microlysias*. As a result of this error the fabric of Barnard's argument for the creation of *M. indica* collapses, since its erection was based on comparison with *Orchomene* mistaken to be *M. xenoceras*. It thus appears that all existing

records of *M. indica* are referable to *M. xenoceras*, the profile of the epistome and upper lip of which is figured as *M. indica* by Barnard (1937). *Microlysias* is best distinguished from *Orchomene* by the structure of antenna 2 ♂, both genera having branchiae pleated on both sides and article 4 of pereopods 3–5 expanded.

Orchomene plicata (Schellenberg, 1925)

Orchomenopsis chilensis Schellenberg, 1925: 119, fig. 3. K. H. Barnard, 1925: 330.

Microlysias xenoceras (non Stebbing, 1918): K. H. Barnard, 1940: 441.

Orchomenella plicata: K. H. Barnard, 1940: 440.

Records: 29/16/I, 32/18/T, O to 34/18/FB/I, T, O, abundant.

Distribution: Cosmopolitan.

Remarks: For discussion of synonymy see *Microlysias* above.

Phoxostoma algoense K. H. Barnard, 1925

Phoxostoma algoense K. H. Barnard, 1925: 323, pl. 34 (fig. 2).

Records: 33/18/T, 34/18/FB/O, a few records.

Distribution: Endemic, Algoa Bay to Table Bay.

Procyphocaris induratus (K. H. Barnard, 1925) *new synonymy*

Uristes induratus K. H. Barnard, 1925: 333, pl. 34 (fig. 3).

Procyphocaris primata J. L. Barnard, 1961: 49, fig. 18.

Remarks: This species does not strictly fall into the scope of the present paper, since it is restricted to depths exceeding 1 000 m. However, I have included it here since its taxonomy is in need of revision.

In his original description of '*Uristes*' *induratus* K. H. Barnard (1925) failed to appreciate the taxonomic significance of the reduced first and second coxae, an error brought to light by J. L. Barnard (1962c) who rejected the species from a revised list of *Uristes* species. J. L. Barnard had, however, inadvertently already redescribed the same species as the type of a new genus (*Procyphocaris primata* J. L. Barnard, 1961). K. H. Barnard's type specimen agrees almost exactly with J. L. Barnard's figures, the only differences being in the posterior margin of article 2 of pereopod 3, which is smooth in the South African specimen and bears three weak serrations in the Australian one. (K. H. Barnard's statement that the flagellum of antenna 2 is bi-articulate is incorrect, there are nine segments in an unbroken flagellum.)

The holotype of the resultant species, correctly known as *Procyphocaris induratus*, is South African Museum number SAM-A4545.

Schisturella adversicola (K. H. Barnard, 1925)

Lakota adversicola K. H. Barnard, 1925: 327.

Chironesimus adversicola: Schellenberg, 1926a: 219, fig. 13. J. L. Barnard, 1962c: 22, fig. 2.

Schisturella adversicola: J. L. Barnard, 1967: 71.

Records: 35/18/VD, a single record.

Diagnosis: Eyes absent, coxa 1 reduced, partially concealed by 2; gnathopod 1 subchelate, palm almost transverse; third pleonal epimeron postero-distally acutely produced; inner ramus of uropod 2 strongly constricted medially; outer ramus of uropod 3 bi-articulate; telson about 50% cleft.

Distribution: Endemic to deep waters off the Cape Peninsula.

Socarnes septimus sp. nov.

Fig. 15

Description of male (2,5 mm): Head hardly longer than pereon segment 1, lateral lobes strongly produced, apically subacute, eyes (Fig. 15A) composed of about 30 separate red ocelli, antenna 1 about as long as head plus two pereon segments, peduncle very stout, article 1 greatly exceeding 2 plus 3 (Fig. 15B), flagellum 5-articulate, bearing aesthetascs, accessory flagellum 3-articulate; antenna 2 (Fig. 15C) only about 1,5 times length of 1, article 5 of peduncle half as long as 4, flagellum 6-articulate; upper lip produced lobately beyond epistome; mandible (Fig. 15D) with weakly toothed incisor, spine row of two small spines, molar large, not strongly ridged, palp 3-articulate, article 2 naked, more than twice length of 1, article 3 with two terminal setae; maxilla 1 (Fig. 15E) with bi-articulate palp, palp article 2 distally serrate, bearing only a single minute apical seta, outer plate with seven strong serrate spines; maxilliped (Fig. 15F), outer plate with seven medial nodules, palp 4-articulate, greatly exceeding outer plate.

Pereon segments with a few scattered dorsal setules; coxae 1–4 considerably longer than their body segments, 1 not concealed by 2, 4 excavate posteriorly; gnathopod 1 (Fig. 15G) simple, articles 5 and 6 subequal, 6 medially constricted, dactyl with accessory tooth; gnathopod 2 (Fig. 15H) chelate, article 6 about 60% length of 5; article 2 of pereopods 3–5 subcircular, posterior margin crenulate with minute setae, anterior margin lined with strong spines, article 4 almost as wide as long, lobed posteriorly, 5–7 slender.

Pleonal epimera 1 and 3 postero-distally rounded, 2 produced into a minute tooth; uropod 1 slightly exceeding 2 and 3, peduncle with a single dorsal spine, outer ramus 70% length of inner, bearing two dorsal spines and one apical spine, inner ramus with one dorsal and one apical spine; peduncle of uropod 2 (Fig. 15I) latero-dorsally keeled, outer ramus with a single dorsal spine, inner ramus with two dorsal spines; uropod 3 (Fig. 15J) with outer margin of peduncle dorsally keeled, outer ramus with small article 2, inner ramus smooth, telson twice as long as broad, 60% cleft, lobes divergent (Fig. 15K), each terminating in two small setae, one plumose.

Female: Similar to male, ovigerous at 2 mm, usually carries only a single enormous ovum.

Holotype: SAM-A13466, male, 2,5 mm.

Type-locality: 34°12'S/18°37'E, 15 May 1961, depth 48 m, substrate khaki sand and shell.

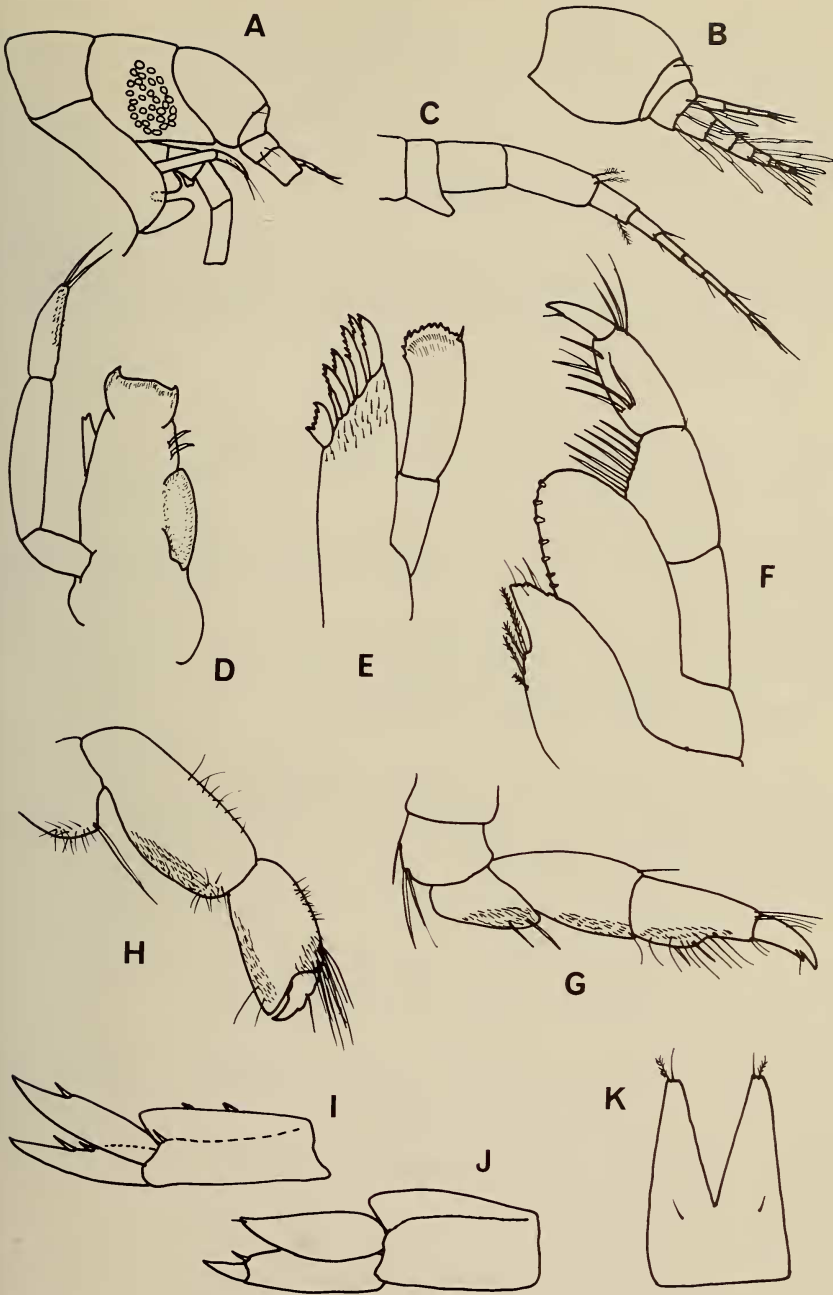


Fig. 15. *Socarnes septimus* sp. nov.

Male, 2,5 mm: A—head; B—antenna 1; C—antenna 2; D—mandible; E—maxilla 1; F—maxilliped; G—gnathopod 1; H—articles 5-7 of gnathopod 2; I—uropod 2 (outer aspect); J—uropod 3 (medial aspect); K—telson.

Relationships: The minute size of this species alone distinguishes it from most other members of the genus. In addition the rounded third pleonal epimeron differs from those of *Socarnes unidentatus* Schellenberg and *S. bidentata* (Bate). *S. dissimulantia* Imbach lacks eyes, while other members of the genus have considerably more slender and longer first antenna than *S. septimus* sp. nov.

Material: 34/18/FB/T, O, fairly common.

Socarnopsis crenulata Chevreux, 1910

Socarnopsis crenulata: K. H. Barnard, 1916: 124. Chevreux & Fage, 1925: 49, figs 31–32.

Records: 33/17/O, 34/18/FB/O, a few records.

Distribution: Mediterranean, Atlantic, South Africa.

Stomacontion capense K. H. Barnard, 1916

Stomacontion capense K. H. Barnard, 1916: 109, pl. 28 (figs 27–28); 1937: 140, fig. 1.

Records: 32/17/D, 34/18/FB/O, two records.

Diagnosis: Head almost entirely obscured by triangular coxa 1; gnathopod 1 slender, simple, dactyl minute; dactyl of gnathopod 2 inserted at middle of distal margin of article 6; article 2 of pereopod 5 greatly lobed posteriorly, lobe extending to tip of article 5 and postero-distally rectangular; pleon segment 4 with rounded dorsal protuberance; uropod 3 without rami or rami vestigial.

Distribution: Endemic, False Bay to Lambert's Bay.

Stomacontion prionoplax Monod, 1937

Stomacontion prionoplax Monod, 1937: 6, figs 1–6. Griffiths, 1974c: 313, fig. 15.

Records: 34/18/FB/O, a single record.

Distribution: Suez Canal, South Africa.

Trischizostoma paucispinosum K. H. Barnard, 1916

Trischizostoma paucispinosum K. H. Barnard, 1916: 107, pl. 26 (fig. 1).

Records: 34/18/D, two records.

Diagnosis: Rostrum inconspicuous; coxa 1 almost completely concealed by 2; gnathopod 1 powerful, article 6 truncated oval, palm subequal to hind margin, sparsely spinose, dactyl smooth, slightly exceeding palm, articles 4 and 5 of pereopods 3–5 slender; telson 50% cleft.

Distribution: Endemic to deep waters off the Cape Peninsula.

Trischizostoma remipes Stebbing, 1908

Trischizostoma remipes Stebbing, 1908b: 61, pl. 34. K. H. Barnard, 1925: 321.

Records: 30/16/D to 34/18/FB/O, fairly common.

Distribution: Endemic, Natal to Hondeklip Bay.

Trischizostoma serratum K. H. Barnard, 1925*Trischizostoma serratum* K. H. Barnard, 1925: 320, pl. 34 (fig. 1).*Records*: 34/18/FB/T.*Distribution*: Endemic, Natal to False Bay.*Uristes sulcus* Griffiths, 1974*Uristes sulcus* Griffiths, 1974c: 315; fig. 16.*Records*: 34/18/FB/O, a few records.*Distribution*: Endemic, Plettenberg Bay to False Bay.Family **Ochlesidae***Ochlesis lenticulosus* K. H. Barnard, 1940*Ochlesis lenticulosus* K. H. Barnard, 1940: 447, fig. 23.*Records*: 34/18/FB/T, O, a few records.*Distribution*: Endemic, Natal to False Bay.Family **Oedicerotidae***Halicreion ovalitelson* K. H. Barnard, 1916*Halicreion ovalitelson* K. H. Barnard, 1916: 165, pl. 27 (fig. 4).*Records*: 34/18/VD, a single record.*Diagnosis*: Rostrum extending to apex of article 1 of antenna 1; eyes absent; article 5 of gnathopods 1 and 2 produced posteriorly into a lobe guarding posterior margin of article 6; uropod 2 extending only to tip of peduncle of uropod 3; telson elongate-oval; entire.*Distribution*: Endemic, the above record is the only one to date.*Monoculodopsis longimana* Ledoyer, 1973*Monoculodopsis longimana* Ledoyer, 1973: 79, figs 22–24.*Records*: 32/18/T, O to 34/18/FB/T, O, numerous records.*Diagnosis*: Primary cutting edge of mandible projecting, toothed, molar represented by a small hump bearing a few spines; inner lobes of lower lip separate; gnathopods dissimilar, both wide posterior lobe of article 5 fully guarding posterior margin of article 6; article 6 of gnathopod 1 broad, expanding distally, palm as long as hind margin, evenly convex, defined by a single spine; article 6 of gnathopod 2 four times as long as broad, palm oblique, convex, defined by a small spine; uropod 2 reaching apex of uropod 3; telson apically emarginate.*Distribution*: Madagascar, South Africa.

Remarks: This species has not previously been recorded from South Africa. The above specimens differ from these of Ledoyer (1973) only in that the mandibular molar is represented by four spines rather than two (gnathopods 1 and 2 are transposed in Ledoyer's figure 22).

Oediceroides cinderella Stebbing, 1888

Oediceroides cinderella Stebbing, 1888: 850, pls 62–63.

Records: 32/18/T, 32/16/D, two records.

Diagnosis: Eyes present; rostrum not strongly deflexed, tapering evenly to an acute point just beyond tip of article 1 of antenna 1; gnathopods similar, article 5 about half length of 6, produced posteriorly as a rounded lobe projecting at right angles, not protecting posterior margin of article 6, palm oblique, convex.

Distribution: Falkland Islands, west coast of South Africa.

Periocolodes longimanus (Bate & Westwood, 1868)

Periocolodes longimanus: Chevreux & Fage, 1925: 162, figs 163–164. Ledoyer, 1972b: 775–781, figs 2–3.

Records: 32/18/T, O, 32/17/D to 34/18/FB/T, O, abundant.

Distribution: Mediterranean, Atlantic, Indian Ocean.

Periocolodes pallidus sp. nov.

Fig. 16

Description of female (2,5 mm): Head about as long as two pereon segments, rostrum extending to apex of article 1 of antenna 1, eyes absent; antenna 1 about 30% length of pereon, articles 1–3 subequal, flagellum 4-articulate; accessory flagellum absent; antenna 2 marginally longer than 1, flagellum 4-articulate; mandible (Fig. 16B) with incisor not strongly toothed, molar represented by a spinose hump, palp 3-articulate, article 2 the longest, article 3 with three strong terminal setae; lower lip without inner lobes; maxilla 1 (Fig. 16C) with bi-articulate palp terminally bearing six setae, outer plate with seven strong apical spines; inner plate of maxilla 2 with four setae, outer plate with six (Fig. 16D); inner plate of maxilliped with two long apical setae, outer plate reaching to centre of article 2 of 4-articulate palp.

Coxae 1–4 successively larger, 4 with a strong seta at postero-distal corner; gnathopods subchelate, similar, article 5 posteriorly guarding article 6; article 6 of gnathopod 1 (Fig. 16F) shorter and stouter than that of gnathopod 2 (Fig. 16G), palm defined by a small spine and with submarginal rows of minute setae, dactyl slightly exceeding palm, constricted just before apex, pereopods 1 and 2 strongly setose, dactyl small (Fig. 16H), surrounded by setae; pereopod 3 much smaller than 4, article 2 as wide as long, 5 with two strong anterior spines; article 2 of pereopod 4 (Fig. 16I) strongly lobed posteriorly, anteriorly and

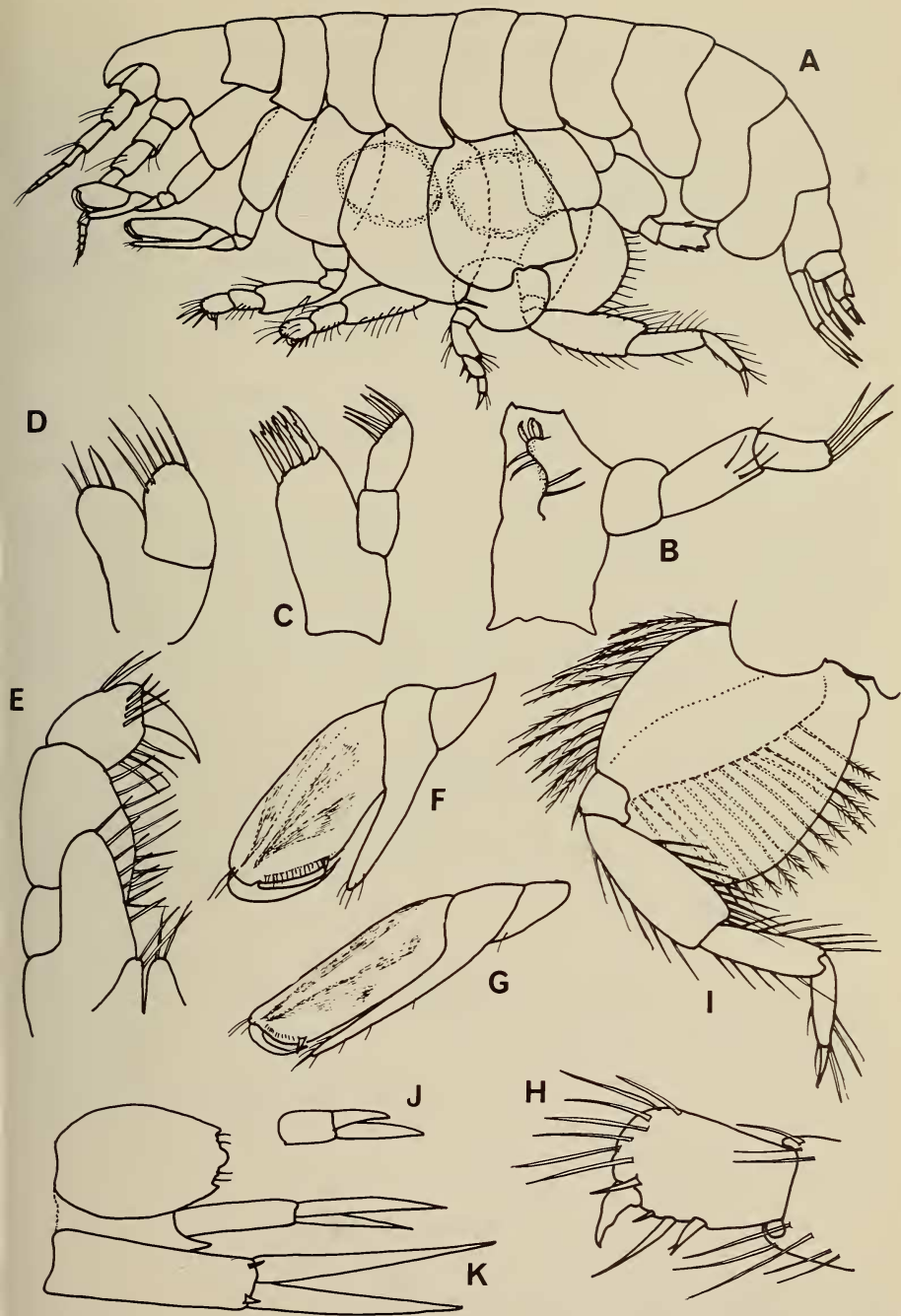


Fig. 16. *Periocolodes pallidus* sp. nov.

Female, 2,5 mm: A—lateral aspect; B—mandible; C—maxilla 1; D—maxilla 2; E—maxilliped; F—articles 5-7 of gnathopod 1; G—articles 5-7 of gnathopod 2; H—articles 6 and 7 of pereopod 1; I—pereopod 4; J—uropod 3. Male, 2,5 mm: K—uropods 2 and 3 and telson.

medially strongly setose, articles 4–6 strongly setose on both margins; articles 5–7 of pereopod 5 missing but articles 2–4 much smaller than those of pereopod 4.

Pleonal epimera 1–3 smoothly rounded; uropod 1 extending beyond 2 and 3, rami smooth, lanceolate; uropod 2 slightly exceeding 3, peduncle with two small distal spines, rami smooth; uropod 3 very short, outer ramus 60% length of inner, both smooth (Fig. 16J); telson entire, with two small apical concavities, each containing two setae, on either side of a small medial bump.

Male: Flagellum of antenna 1 hirsute; flagellum of antenna 2 7-articulate, palm of gnathopod 2 transverse; article 2 of pereopods 3 and 4 not as strongly lobed as in ♀; uropod 3 considerably longer (Fig. 16K) than that of ♀.

Holotype: SAM-A13232, ovigerous female, 2,5 mm.

Type-locality: 34°13'S/18°31'E, 22 May 1961, depth 39 m, substrate sand.

Relationships: *Periocolodes pallidus* sp. nov. differs from other members of the genus by reason of its large coxae, reduced third (and fifth?) pereopods, short antennae in both sexes and naked uropods.

Remarks: The most notable feature of the holotype is the small size of the proximal articles of pereopod 5, indicating a probable total length considerably less than that of pereopod 4. This would be in conflict with the normal condition in the genus, or indeed the family Oedicerotidae, which characteristically has pereopod 5 larger than 4. However, pereopod 5 was found only on one side of one of the individuals collected, being lost in all other cases—a characteristic often associated with great length. Thus, until the condition of pereopod 5 is verified by undamaged specimens, I have placed this species in the genus *Periocolodes* on the basis of other characters, particularly the structure of the gnathopods which in the ♀ are practically identical with those of *P. aequimanus* (Kossmann). Should the reduced condition of pereopod 5 be confirmed by further material this would be strong evidence for the creation of a new genus.

Material: 34/18/O, two records.

Synchelidium tenuimanus Norman, 1871

Synchelidium tenuimanus: Oldevig, 1933: 131, fig. 2.

Records: 34/18/FB/D, 34/18/D, a few records.

Diagnosis: Rostrum strong, reaching almost to apex of article 1 of antenna 1; eyes of moderate size; gnathopod 2 extremely slender and elongate, the chela occupying only about 15% of its length.

Distribution: Atlantic, South Africa.

Westwoodilla manta Griffiths, 1974

Westwoodilla manta Griffiths, 1974c: 318, fig. 17.

Records: 31/18/O, D to 34/18/FB/D, fairly common.

Distribution: Endemic, Plettenberg Bay to Lambert's Bay.

Family **Paramphithoidae***Epimeria longispinosa* K. H. Barnard, 1916

Epimeria longispinosa K. H. Barnard, 1916: 172, pl. 27 (fig. 6).

Records: 34/18/D-VD, a single record.

Diagnosis: Pereon dorsally smooth; coxae 1-3 acutely pointed below, 4 crescent-shaped, much longer than 3, 5 postero-distally produced into a narrow spiniform process which extends to end of pleon segment 1; pleon segments 1-4 feebly carinate, carinae on segments 2-4 posteriorly toothed; pleonal epimera quadrate, without accessory teeth.

Distribution: Endemic, the above record is the only one to date.

Epimeria semiarmata K. H. Barnard, 1916

Epimeria semiarmata K. H. Barnard, 1916: 171, pl. 27 (fig. 3).

Records: 34/18/D, a single record.

Diagnosis: Pereon segments dorsally smooth; coxae 1-3 acutely pointed below, 4 somewhat longer than 3, 5 pentagonal, not postero-distally produced; pleon segments 1 and 2 dorsally smooth, 3 with a faint carina ending in a minute tooth, 4 depressed basally, distally humped; pleonal epimera 2 and 3 slightly produced postero-distally, lacking accessory teeth.

Distribution: Endemic to deep waters off the Cape Peninsula.

Family **Pardaliscidae***Halice anacantha* K. H. Barnard, 1925

Halice anacantha K. H. Barnard, 1925: 347, pl. 34 (fig. 12)

Pardisynopia anacantha: J. L. Barnard, 1969: 400. Griffiths, 1974c: 320.

Halice anacantha: Karaman 1974: 13.

Records: 32/17/D, 34/18/D, a few records.

Distribution: Endemic, Plettenberg Bay to Lambert's Bay.

Remarks: In revising the family Pardaliscidae Karaman (1974) has amalgamated *Pardisynopia* with *Halice* on the basis that component species can no longer be separated into discreet groups, but provide a full range of variability between the two previous generic definitions.

Family **Phoxocephalidae***Heterophoxus cephalodens* sp. nov.

Fig. 17

Description of female (3.5 mm): Head (Fig. 17A) as long as first three pereon segments, rostrum medio-dorsally keeled, lateral margins with small cornified ridges, apex acute, reaching beyond apex of article 3 of antenna 1, lower corner

of head produced into a strong acute tooth, eyes small, composed of 4–5 individual ocelli; antenna 1 (Fig. 17B) with 7-articulate flagellum, accessory flagellum 6-articulate; antenna 2 (Fig. 17C) with basal ensiform process, flagellum 7-articulate; mandibular incisor strongly toothed, spine row of seven spines, molar represented by a small process bearing two serrate spines, palp elongate, article 2 with three distal setae, article 3 as long as 2, falciform, bearing nine apical setae; maxilla 1 with bi-articulate palp exceeding outer plate; article 4 of maxillipedal palp (Fig. 17D) with two small marginal setae and one long terminal seta.

Gnathopods 1 and 2 subequal, subchelate, palm oblique, defined by a distinct step; pereopods 1 and 2 normal; coxae 1–4 distally setose, coxa 4 excavate posteriorly; article 2 of pereopod 3 (Fig. 17E) slender, hardly wider than article 3, articles 4–6 lined on both margins with plumose setae, article 7 spiniform; pereopod 4 larger than 3 or 5; pereopod 5 (Fig. 17F) with article 2 postero-distally produced to tip of article 4, posterior margin cut into about seven teeth, a minute seta in each notch; antero-distal corner of article 2 with four long plumose setae, articles 3 and 4 each with two plumose setae anteriorly.

First pleonal epimeron (Fig. 17G) minutely produced postero-distally, second with five distal setae, postero-distal corner subacute; third pleonal epimeron with an oblique row of setae leading to a small seta-bearing notch above rounded postero-distal corner; uropods 1–3 extending about equally; uropod 1 (Fig. 17H) with outer ramus spiniform, 60% length of inner, inner ramus with six dorsal and two apical spines; uropod 2 (Fig. 17I) with outer margin of peduncle dorsally keeled, bearing six dorsal spines, rami equal, outer with eight dorsal and two terminal spines, inner with three dorsal and two terminal spines; peduncle of uropod 3 (Fig. 17J) ventrally spinose, outer ramus with second article 25% length of first and terminating in two plumose setae, inner ramus as long as article 1 of outer; telson (Fig. 17K) short, extending only to tip of peduncle of uropod 3, 80% cleft, each lobe bearing two small brush setae and a minute subapical spine.

Holotype: SAM–A13468, ovigerous female, 3,5 mm.

Type-locality: 34°19'S/18°29'E, 13 July 1967, depth 51 m, substrate khaki sand.

Relationship: The reduced spiniform outer ramus of uropod 2 distinguishes this species from other members of the genus. The produced post-antennal corner of the head is unusual, being shared only by *H. opus* sp. nov. (below).

Material: 34/18/FB/O, 32/18/T, D, VD, a few records.

Heterophoxus opus sp. nov.

Fig. 18

Description of female (4 mm): Head as long as first two pereon segments, rostrum dorsally smooth, apically rounded, extending to apex of article 3 of antenna 1, post-antennal corner of head acutely produced (Fig. 18A), eyes

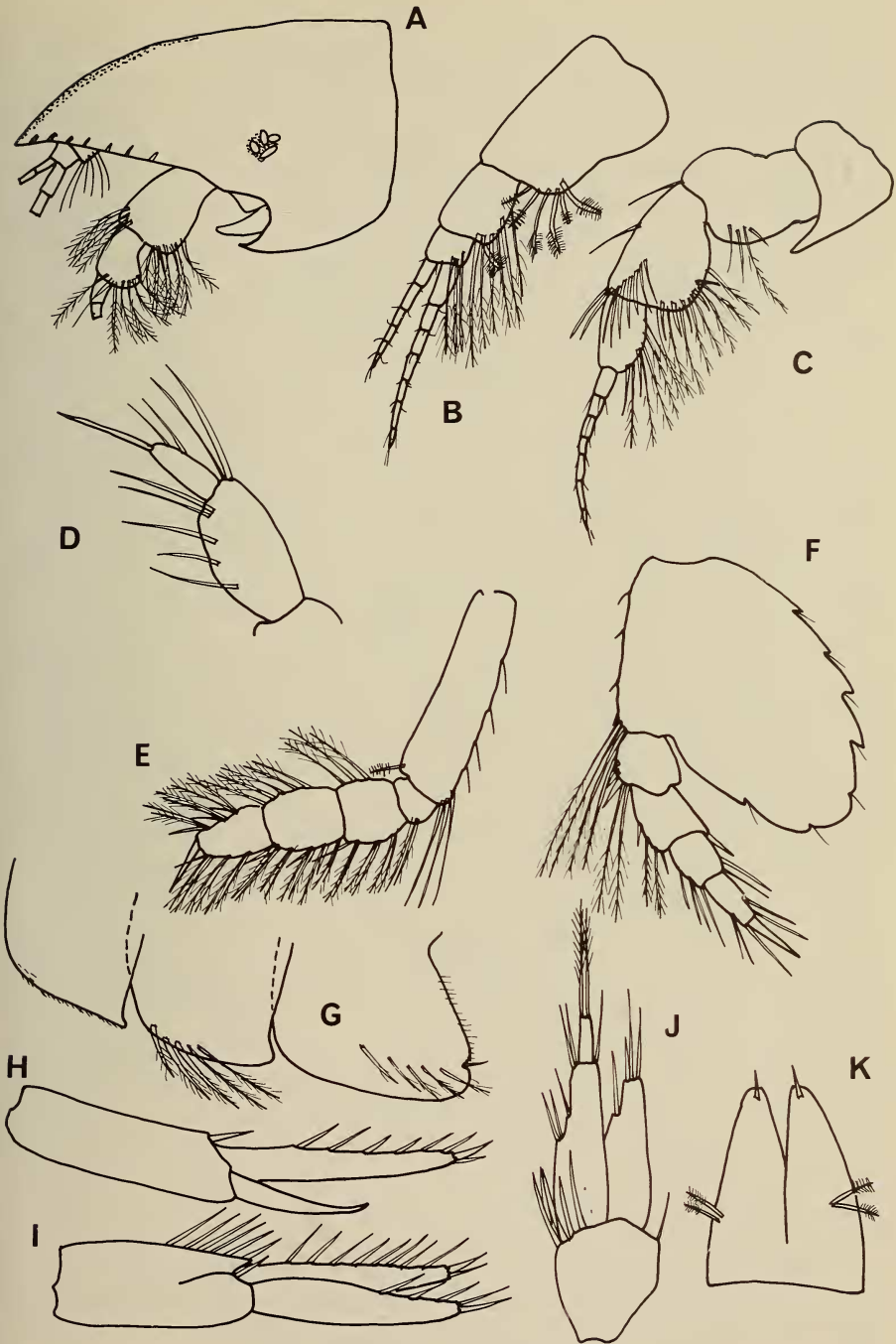


Fig. 17. *Heterophoxus cephalodens* sp. nov.

Female, 3,5 mm: A—head; B—antenna 1; C—antenna 2; D—articles 3 and 4 of maxillipedal palp; E—pereopod 3; F—pereopod 5; G—pleonal epimera 1-3; H, I, J—uropods 1, 2, 3; K—telson.

composed of about eight individual ocelli; article 1 of antenna 1 (Fig. 18B) with four posterior brush setae, articles 2 and 3 much smaller than 1, flagellum 6-articulate, accessory flagellum 4-articulate; antenna 2 (Fig. 18C) with ensiform process, flagellum 7-articulate; mandibular incisor with distinct teeth, spine row of eight spines, molar represented by a process bearing two serrate spines, article 2 of palp naked, article 3 with three terminal setae; maxilla 1 (Fig. 18D) with bi-articulate palp terminating in seven spines, outer plate with eleven apical spines, inner plate with three simple setae and one brush seta; article 4 of maxillipedal palp (Fig. 18E) with two small lateral setae and one strong terminal seta.

Gnathopods subchelate, palm oblique, defined by a small lobe, gnathopod 2 slightly the larger; pereopods 1 and 2 normal; coxae 1-4 ventrally setose; pereopod 3 (Fig. 18F) with article 2 hardly wider than 3, articles 4-6 setose, 4 and 5 with a long postero-distal plumosa seta; pereopod 4 longer than 3 or 5, dactyl elongate, spiniform; pereopod 5 (Fig. 18G) with article 2 greatly expanded posteriorly, distally produced to middle of article 4, posterior margin with 11 minute serrations each bearing a setule, antero-distal corner of article 2 with a single plumose seta, articles 3 and 4 without plumose setae.

First pleonal epimeron with two distal plumose setae, postero-distally quadrate, second pleonal epimeron with four distal setae, postero-distally quadrate; third pleonal epimeron (Fig. 18H) with two distal spines, postero-distally rounded with two minute setulose notches on posterior margin; uropod 1 slightly exceeding 2, peduncle with four dorsal spines, rami subequal (Fig. 18I), outer with three dorsal spines, inner dorsally smooth; uropod 2 (Fig. 18J) with six dorsal and one terminal peduncular spines, rami subequal, outer with four dorsal spines, inner dorsally smooth; uropod 3 (Fig. 18K) with peduncle apically spinose, outer ramus with article 2 50% length of 1, bearing a long apical spine, inner ramus 80% length of outer, naked; telson (Fig. 18L) short, 80% cleft, each lobe with a dorsal brush seta, and small apical spine.

Holotype: SAM-A13469, female, 3,5 mm.

Type-locality: 34°18'S/18°29'E, 13 July 1967, depth 51 m, substrate khaki sand.

Relationships: Because of its eyes this species falls into the genus *Heterophoxus*, although the third uropods are more closely allied to those of *Harpinia*, which is an eyeless genus as presently defined. However, recent findings indicate that the presence or absence of eyes is a dubious generic character, since species possessing both oculate and anoculate forms have recently been described. If eyes were to be disregarded as generic characters a considerable revision of the group would be required, a task I am not in a position to carry out. I have thus allocated this species to *Heterophoxus* provisionally so as to at least maintain the *status quo*.

Heterophoxus opus sp. nov. may be distinguished from *H. cephalodens* sp. nov. by the rami of uropod 1, which are subequal, and from other species in the genus by the produced post-antennal corner of the head.

Material: 34/18/FB/O, two records.

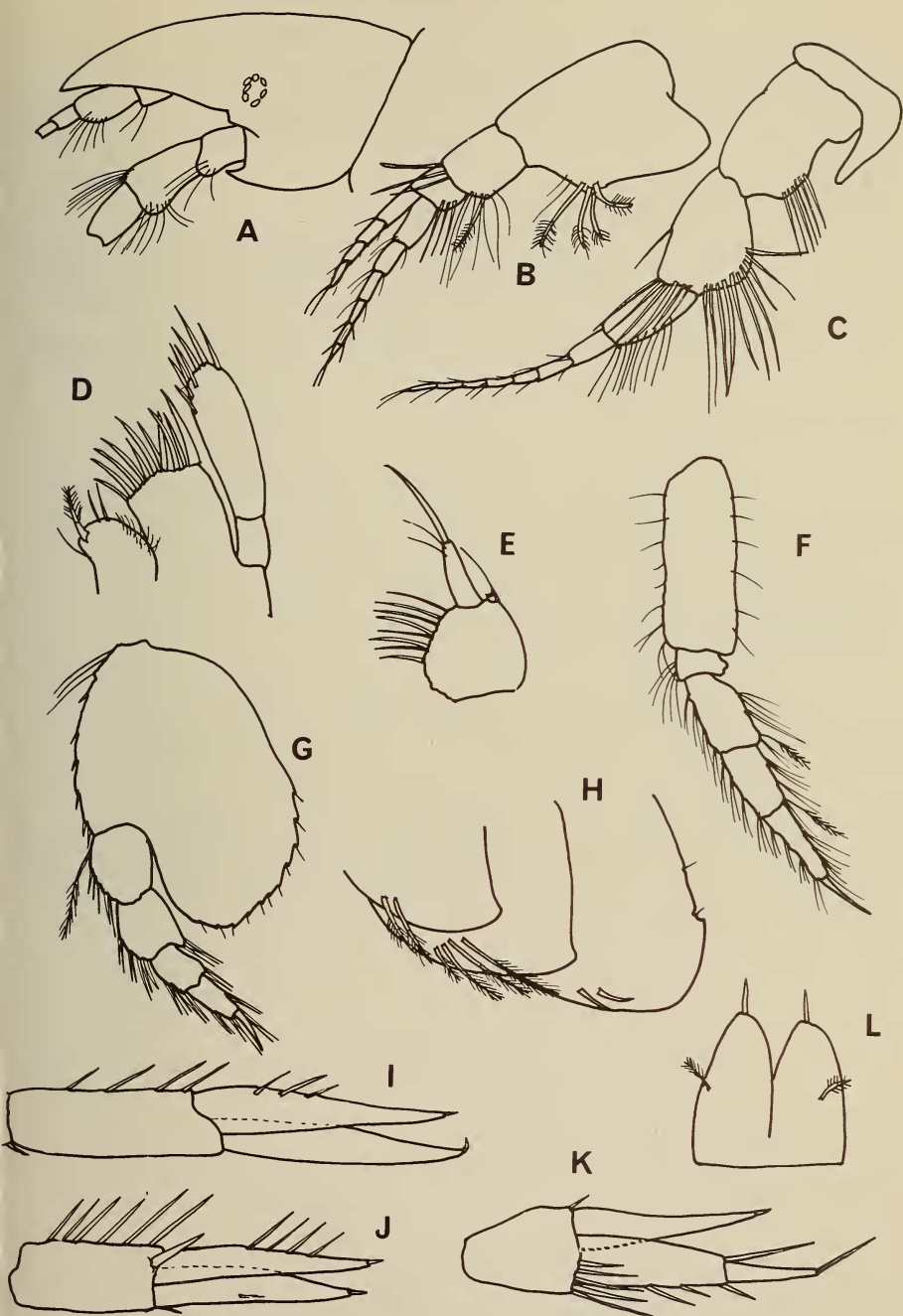


Fig. 18. *Heterophoxus opus* sp. nov.

Female, 4 mm: A—head; B—antenna 1; C—antenna 2; D—maxilla 1; E—articles 3 and 4 of maxillipedal palp; F—pereopod 3; G—pereopod 5; H—pleonal epimera 1-3; I, J, K—uropods 1, 2, 3; L—telson.

Mandibulophoxus stimpsoni (Stebbing, 1908)

Pontharpinia stimpsoni Stebbing, 1908b: 75, pl. 11.

Mandibulophoxus stimpsoni: J. L. Barnard, 1957: 436, figs 3-4.

Records: 32/18/T, 34/18/FB/T, O, D, abundant in False Bay but uncommon elsewhere.

Distribution: West and South Africa.

Paraphoxus oculus Sars, 1891

Paraphoxus oculus: J. L. Barnard, 1960: 240-243, pls 27-28.

Records: 32/17/D, 32/16/D, VD to 34/18/FB/T, O, 34/18/D, numerous records.

Distribution: Circumboreal.

Platyischnopus herdmani Walker, 1904

Platyischnopus capensis K. H. Barnard, 1925: 338, pl. 34 (figs 13-14).

Platyischnopus herdmani: Rabindranath, 1971a: 521, figs 1-2.

Records: 32/18/T to 34/18/FB/T, O, numerous records.

Distribution: India, South Africa.

Pseudharpinia excavata (Chevreux, 1887)

Harpinia excavata: K. H. Barnard, 1925: 340. J. L. Barnard, 1962c: 47, figs 37-38.

Records: 32/17/D to 34/18/FB/O, 34/18/D, a few records.

Diagnosis: Head with small post-antennal tooth, eyes absent; article 2 of pereopod 5 with several antero-distal setae, posterior margin with 10 small serrations; third pleonal epimeron with small postero-distal tooth.

Distribution: Atlantic, Pacific.

Family **Podoceridae***Laetmatophilus purus* Stebbing, 1888

Laetmatophilus purus Stebbing, 1888: 1198, pl. 132.

Records: 32/18/O, 32/16/D to 34/18/FB/T, O, 34/18/D, numerous records.

Distribution: Endemic, Moçambique to South West Africa.

Laetmatophilus tridens K. H. Barnard, 1916

Laetmatophilus tridens K. H. Barnard, 1916: 275, pl. 28 (fig. 22).

Records: 33/18/I, 34/18/FB/T, O, a few records.

Distribution: Endemic, Moçambique to Saldanha Bay.

Podocerus africanus K. H. Barnard, 1916

Podocerus africanus K. H. Barnard, 1916: 278, pl. 28 (figs 24–25); 1937: 176, fig. 19.

Records: 33/17/T, 34/18/T, 34/18/FB/I, T, O, a few records.

Distribution: Arabia, Natal to South West Africa.

Podocerus inconspicuus (Stebbing, 1888) *new synonymy*

Podocerus palinuri K. H. Barnard, 1916: 277, pl. 28 (fig. 23).

Podocerus cristatus (*non* Thompson, 1879): K. H. Barnard, 1916: 276. Griffiths, 1973: 298; 1974a: 202; 1974c: 323.

Records: 29/16/I, 31/16/D to 34/18/FB/T, O, 34/18/O, D, numerous records.

Distribution: Indian Ocean, west coast of South Africa.

Remarks: K. H. Barnard (1916, 1940) and Griffiths (1973, 1974a, c) have previously recognized two South African species—*Podocerus inconspicuus* (= *palinuri*) and '*P. cristatus*'—distinguishing them on the basis of degree of dorsal carination. As more material has been collected, however, it has become obvious that the two forms represent the extremes of a continuous range of variation. All previous records of these two forms have thus been combined under the name *P. inconspicuus*. This form is probably not synonymous with the original *P. cristatus* of Thompson, which lacks a defining tooth on the palm of gnathopod 2 ♂, a feature present in all southern African specimens. *P. inconspicuus* has now been recorded in every condition from totally lacking dorsal carinae (Stebbing 1888), through various intergrades (e.g. Pirlet 1938) to fully carinate (Barnard 1916—as *P. palinuri*).

P. inconspicuus should be rediagnosed as follows: Body showing variable carination, carinae at first developing on pereon segments 6 and 7 and progressing forwards until in adult specimens the head has a low rounded keel and all pereon segments show distinct carinae, these being largest on pereon segments 5–7 and on pleon segments 1 and 2, small subdorsal processes may also develop on the posterior pereon segments; palm of gnathopod 1 ♂ oblique, dactyl serrate; palm of gnathopod 2 ♂ defined by a small lobe and with two strong distal teeth; palm of gnathopod 1 ♀ transverse, minutely serrate; palm of gnathopod 2 ♀ defined by a small lobe and with two small distal teeth; uropods moderately spinose; telson with 6–8 dorsal spine setae.

P. inconspicuus may be distinguished from *P. hystrix* Stebbing and *P. danae* Stebbing by the presence of a defining lobe on the palm of gnathopod 2 and the absence of a strong upstanding head process.

Podocerus multispinis K. H. Barnard, 1925

Podocerus multispinis K. H. Barnard, 1925: 367, pl. 34 (fig. 18).

Records: 33/17/O, 34/18/O, 34/18/FB/O, a few records.

Distribution: Endemic, Natal to Saldanha Bay.

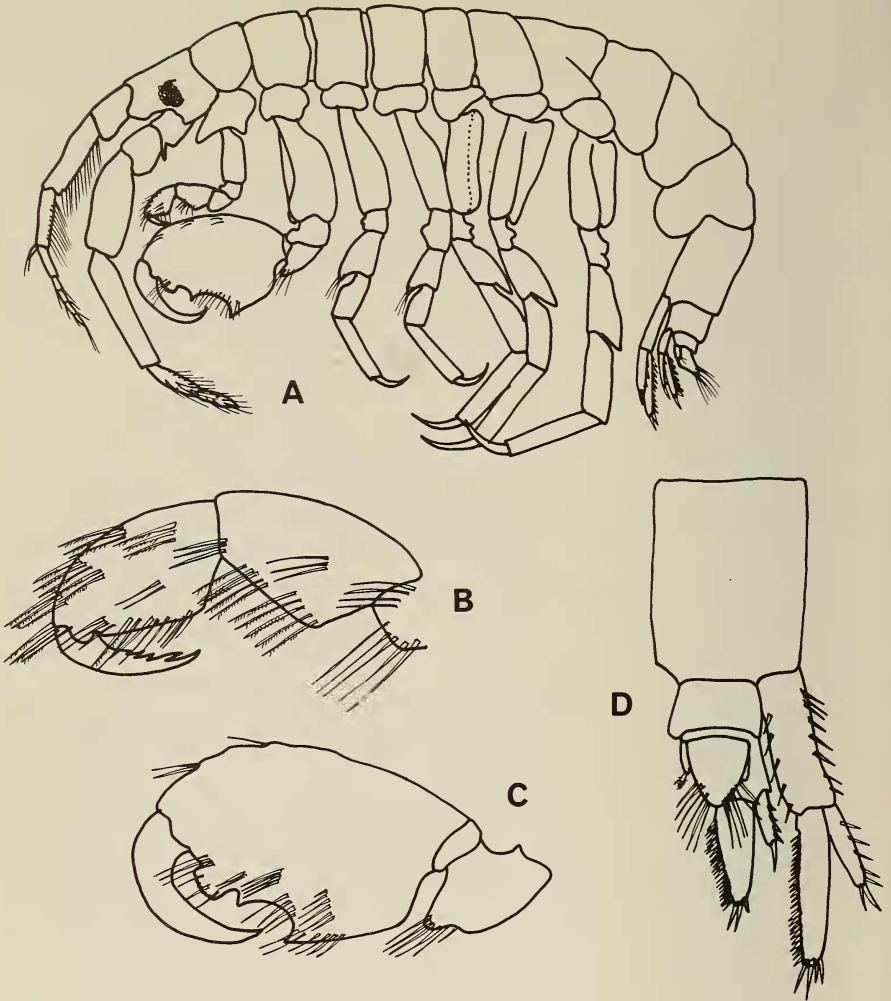


Fig. 19. *Podocerus pyuræ* sp. nov.

Male, 7 mm: A—lateral aspect; B—articles 5-7 of gnathopod 1; C—articles 4-7 of gnathopod 2; D—urosome (dorsal aspect).

Podocerus pyuræ sp. nov.

Fig. 19

Description of male (7 mm): Body without dorsal carinae, tubercles or spines; head slightly longer than first pereon segment, eyes round, red, not reaching margin of head; antenna 1 shorter than peduncle of 2, articles 1 and 3 of peduncle subequal, slightly shorter than 2, flagellum 5-articulate, accessory flagellum of a single article; antenna 2 considerably stouter than 1, article 5 longer than 4, flagellum of two large articles and one small article.

Coxa 1 antero-distally produced forwards, following coxae subquadrate; gnathopod 1 (Fig. 19B) subchelate, articles 5 and 6 subequal, palm oblique, undefined, dactyl cut into several strong teeth; gnathopod 2 powerfully subchelate (Fig. 19C), article 2 anteriorly keeled, not strongly lobed distally, article 4 not strongly produced distally, hind margin of article 6 almost as long as palm, palm oblique, defined by a strong tooth and with a smaller triangular tooth distally and then a strong rectangular castellate process near finger-hinge, dactyl strongly curved, subequal to palm; pereopods 1–2 considerably shorter than 3–5, article 2 four times as long as wide, 4 somewhat produced antero-distally, 6 longer than 5, dactyl large; article 2 of pereopods 3–5 posteriorly keeled, keel external on pereopod 3, medial on pereopods 4 and 5, article 4 somewhat produced postero-distally.

Pleonal epimera 1–3 postero-distally rounded; uropod 1 (Fig. 19D) much longer than 2, peduncle with two dorsal rows of slender spines, outer ramus 60% length of inner and considerably narrower than it, with five dorsal and two terminal spines, inner ramus with a comb-like row of close-set slender spines dorsally and four larger spines apically; uropod 2 similar to 1 but considerably shorter and with fewer spines; uropod 3 consisting of a small lobe with two minute terminal setae; telson with about six distal setae on each margin.

Female: Indistinguishable from the male except for the presence of brood plates.

Holotype: SAM-A13480, male, 7 mm.

Type-locality: Branchial cavity of ascidian (*Pyura stolonifera*) collected intertidally at Kalk Bay, on the shores of False Bay, by Miss R. J. Imrie, 10 December 1973.

Relationships: This species has close affinities with *P. hanapepe* J. L. Barnard, *P. mangarevae* Chevreux and *P. zeylanica* Walker but differs from all these species in possessing comb-like rows of spines on the dorsal surfaces of the inner rami of uropods 1 and 2.

Material: Seven specimens from the type-locality.

Family Sebidae

Seba saundersi Stebbing, 1875

Fig. 20

Paravalettia chelata K. H. Barnard, 1916: 112, pl. 26 (figs 2–3).

Seba saundersii: K. H. Barnard, 1957: 7, fig. 4.

Records: 33/18/I, 34/18/FB/O, a few records.

Diagnosis: Gnathopod 1 developing from chelate and lacking in palmer teeth, through subchelate with palm transverse and moderately toothed to subchelate with palm oblique and strongly toothed; article 5 of gnathopod 2 shorter than 6; article 2 of pereopods 4 and 5 subcircular, article 4 weakly expanded in juveniles, greatly expanded and strongly produced postero-distally in adults; pleonal epimera postero-distally with a small tooth.

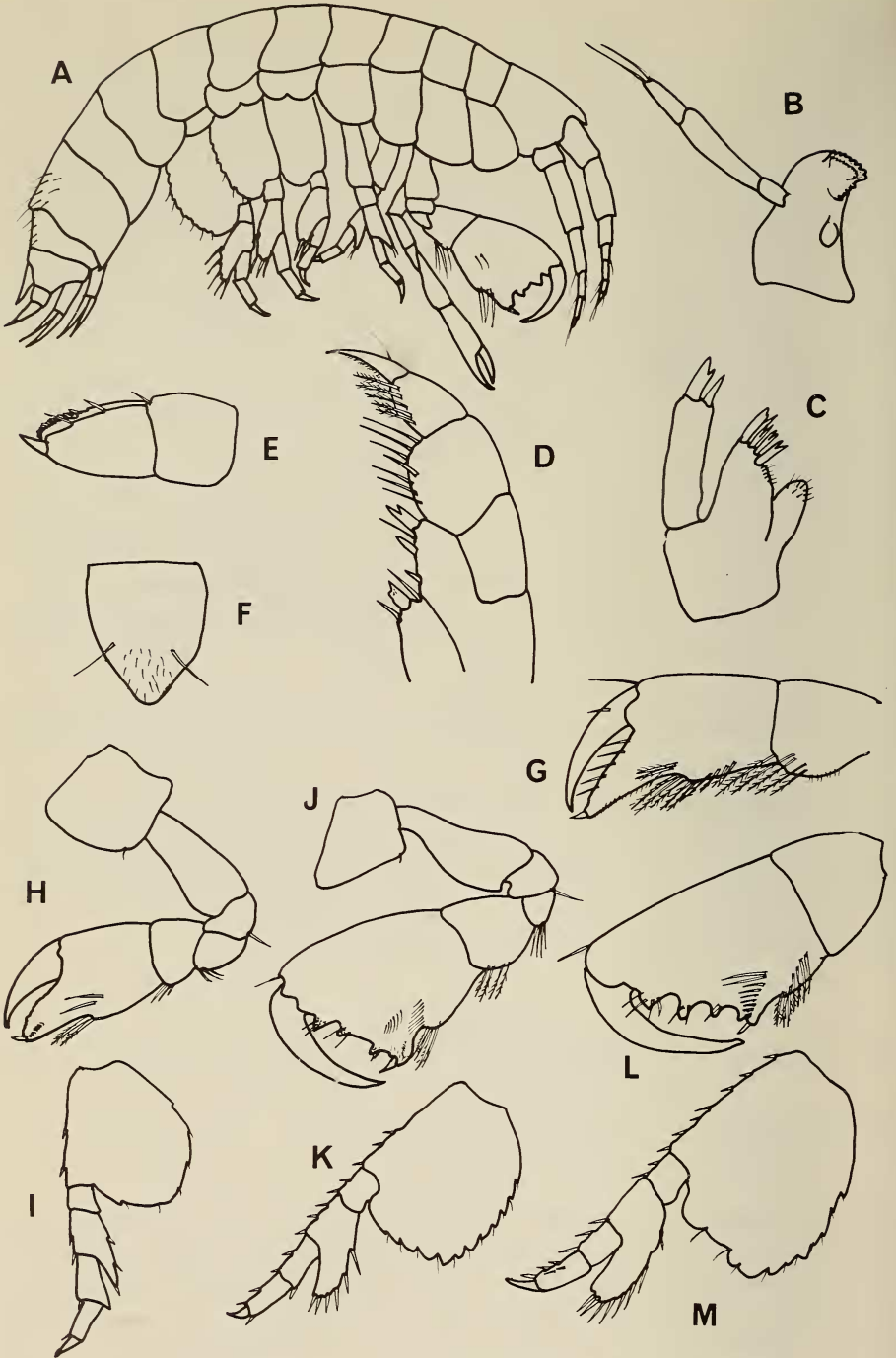


Fig. 20. *Seba saundersi* Stebbing, 1888

Male, 2,5 mm: A—lateral aspect; B—mandible; C—maxilla 1; D—maxilliped; E—uropod 3; F—telson. Female, 2 mm: G—gnathopod 1. Male, 1,4 mm: H—gnathopod 1; I—pereiopod 5. Male, 2,4 mm: J—gnathopod 1; K—pereiopod 5. Male, 3,0 mm: L—gnathopod 1; M—pereiopod 5.

Distribution: Southern Atlantic.

Remarks: The current material includes a sample of 24 individuals from a single station and this opportunity has been utilized to provide figures of growth stages (Fig. 20). The variability of the structure of gnathopod 1 and of pereopod 5 is remarkable and, as these characters are often used for identification, it seems likely that when developmental stages of other species are known a revision of the genus will become necessary.

Family Stegocephalidae

Stegocephaloides attingens K. H. Barnard, 1916

Stegocephaloides attingens K. H. Barnard, 1916: 131, pl. 26 (fig. 5). J. L. Barnard, 1961: 60, fig. 29.

Records: 34/18/VD, two records.

Diagnosis: First pereon segment tumid; eyes absent; coxae very large, forming a continuous shield; coxa 4 with inferior margin very short, evenly curved; article 2 of pereopod 5 apically acute, reaching to apex of article 5, hind margin weakly serrate; third pleonal epimeron postero-distally subquadrate.

Distribution: Angola to Cape Point.

Stegocephaloides australis K. H. Barnard, 1916

Stegocephaloides australis K. H. Barnard, 1916: 129, pl. 28 (fig. 29).

Records: 32/18/O to 34/18/FB/O, 34/18/D, VD, a few records.

Distribution: Endemic, Plettenberg Bay to Lambert's Bay.

Family Stenothoidae

Proboloides rotunda (Stebbing, 1917)

Metopa rotundus Stebbing, 1917: 39, pl. 7A.

Proboloides rotunda: K. H. Barnard, 1940: 444.

Records: 33/17/O, 34/18/D, 34/18/FB/O, fairly common.

Distribution: Endemic, Natal to Saldanha Bay.

Stenothoe adhaerans Stebbing, 1888

Stenothoe adhaerans Stebbing, 1888: 748, pl. 39.

Records: 32/18/T, 33/17/O, 34/18/?, a few records.

Diagnosis: Antennae subequal, half body length; palm of gnathopod 1 defined by five spines, pectinate throughout, dactyl pectinate; gnathopod 2 ♂ fairly large, palm occupying 70% length of hand, defined by two spines and irregularly dentate throughout with one larger tooth near finger-hinge; article 4 of

pereiopods 3–5 considerably expanded, postero-distally produced almost to tip of article 5; uropod 3 uniramous, article 2 of ramus straight.

Distribution: Endemic, Cape Agulhas to Lambert's Bay.

Remarks: This species was previously known only from the female.

Stenothoe valida Dana, 1853

Stenothoe valida: J. L. Barnard, 1970b: 250, fig. 165.

Records: 32/18/T, 33/17/O, a few records.

Distribution: Cosmopolitan in tropical and temperate seas.

Family Synopiidae

Tiron australis Stebbing, 1908

Tiron australis Stebbing, 1908b: 79, pl. 38.

Records: 34/18/FB/T, O, 34/19/O, a few records.

Distribution: Endemic, Natal to False Bay.

Superfamily TALITROIDEA

Family Ceinidae

Afrochiltonia capensis K. H. Barnard, 1916

Chiltonia capensis K. H. Barnard, 1916: 224, pl. 27 (figs 38–40).

Afrochiltonia capensis: K. H. Barnard, 1955: 93.

Records: 34/18/FB/E to 31/18/E, a few records.

Distribution: Endemic, Kosi Bay to Olifants River, a brack-water species.

Family Talitridae

Hyale diastoma K. H. Barnard, 1916

Hyale diastoma K. H. Barnard, 1916: 232, pl. 28 (fig. 8).

Records: 33/18/I, 34/18/FB/I, a few records.

Distribution: False Bay to South West Africa.

Hyale grandicornis (Kröyer, 1845) *new synonymy*

Allorchestes inquirendus K. H. Barnard, 1940: 477, fig. 34b–c. Griffiths, 1974a: 202; 1974c: 328.

Hyale grandicornis: Hurley, 1957: 904, figs 1–29.

Records: 26/16/I to 34/19/I, numerous records.

Distribution: Cosmopolitan in tropical and temperate seas.

Remarks: *Allorchestes inquirendus* was erected by K. H. Barnard (1940) solely on the basis of the lobe on article 5 of gnathopod 2 ♂, a feature supposedly absent in the otherwise identical *Hyale grandicornis*. The transitory or variable

nature of such processes has, however, been known for some time, thus Hurley (1957) writes: 'Although this diagnostic character is unmistakable in the adult ♂ of *Allorchestes* the generic distinction is slurred over by the development of a similar process in the juveniles of *Hyale*; a process which does not always disappear in the adult males . . . being well exemplified by *Hyale grandicornis*.' Reid (1951) has noted similar changes in *H. perieri* and a continuous range of variation is found amongst *H. grandicornis* from South Africa. *Allorchestes inquirendus* is thus an invalid species and falls to *Hyale grandicornis*.

Hyale hirtipalma (Dana, 1852)

Hyale hirtipalma: K. H. Barnard, 1916: 234. Hurley, 1957: 922, figs 118-146.

Hyale macrodactyla (non Stebbing, 1899): K. H. Barnard, 1916: 235.

Records: 29/16/I to 34/18/FB/I, a few records.

Distribution: Pacific, South Atlantic.

Hyale maroubrae Stebbing, 1899

Hyale maroubrae: Hurley, 1957: 913, figs 51-71.

Records: 33/18/I, 34/18/FB/I, a few records.

Distribution: Widespread in Southern hemisphere.

Hyale plumulosa (Stimpson, 1853)

Hyale plumulosa: Bousfield, 1973: 155, pl. 44 (fig. 2).

Records: 34/19/I, a single record.

Diagnosis: Article 1 of antenna 1 not postero-distally lobed; article 5 of antenna 2 and flagellum covered with a dense growth of fine plumose setae; coxae 1-4 with posterior triangular processes; palm of gnathopod 1 transverse; palm of gnathopod 2 ♂ oblique, evenly convex, subequal to hind margin; article 2 of pereopods 1-5 weakly crenulate posteriorly; uropod 1 with long spine on inner distal margin of peduncle.

Distribution: Atlantic and Pacific coasts of North America, South Africa.

Remarks: The above specimens, the first of this species recorded from Africa, agree perfectly with the description given by Bousfield (1973).

Hyale saldanha Chilton, 1912

Hyale saldanha Chilton, 1912: 509, pl. 2 (figs 24-29).

Records: 29/16/I to 34/19/I, numerous records.

Distribution: Endemic, East London to South West Africa.

Orchestia ancheidos (K. H. Barnard, 1916)

Talorchestia ancheidos K. H. Barnard, 1916: 221, pl. 27 (figs 35–36); 1940: 470, fig. 31. Ruffo, 1947: 121, figs 3–5.

Orchestia ancheidos: Ruffo, 1958: 43, figs 3–4.

Records: 32/18/E to 34/19/E, a few records.

Distribution: Madagascar, southern and West Africa, usually in brack waters.

Orchestia dassenensis (K. H. Barnard, 1916)

Parorchestia dassenensis K. H. Barnard, 1916: 227, pl. 28 (figs 1–2).

Records: 33/18/I, 34/19/I, a few records.

Diagnosis: Antenna 1 almost as long as 2, antenna 2 slender; articles 4–6 of gnathopod 1 ♂ each with a posterior pellucid lobe; articles 2 and 3 of gnathopod 2 ♂ anteriorly lobed, article 6 oval, palm oblique, moderately spinose, a small notch near finger-hinge and another near defining angle, dactyl slightly exceeding palm, inner margin sinuous, tip averted; articles 4 and 5 of pereopod 5 linear; third pleonal epimeron quadrate with a minute postero-distal tooth; outer ramus of uropod 1 smooth.

Distribution: Endemic, Cape Agulhas to Saldanha Bay.

Orchestia gammarella (Pallas, 1766) *new synonymy*

Orchestia gammarella: Chevreux & Fage, 1925: 274, fig. 284. Bousfield, 1973: 159, pl. 45 (fig. 1)
Talorchestia inaequalipes K. H. Barnard, 1951: 705, fig. 5a–b. Griffiths, 1974c: 330.

Records: 33/18/I, a few records.

Diagnosis: Articles 4 and 5 of antenna 2 ♂ not expanded; palm of gnathopod 2 ♂ evenly convex, smooth, subequal to hind margin, dactyl evenly convex, tip not averted, slightly exceeding palm; articles 4 and 5 of pereopod 5 of adult ♂ strongly expanded, giving limb an oar-like appearance; outer ramus of uropod 1 dorsally spinose.

Distribution: North Atlantic, South Africa.

Remarks: A re-examination of Barnard's types of *Talorchestia inaequalipes* has shown gnathopod 1 ♀ to be distinctly subchelate. This species thus should be transferred to *Orchestia* where it appears to be synonymous with *Orchestia gammarella*.

Orchestia platensis Kröyer, 1845

Orchestia platensis: Bousfield, 1973: 160, pl. 46 (fig. 2).

Records: 34/19/I, two records.

Diagnosis: Articles 4 and 5 of antenna 2 ♂ greatly inflated; palm of gnathopod 2 ♂ convex, oblique, subequal to hind margin, a sharp notch near defining angle followed by a small hump which is prolonged as a ridge running along medial margin of hand, dactyl slightly exceeding palm, tip not averted; articles 4 and 5

of pereopod 5 ♂ strongly inflated but cylindrical (not oar-like as in *O. gamma-rella*); outer ramus of uropod 3 smooth.

Distribution: Cosmopolitan in tropical and temperate seas.

Remarks: This species has not previously been recorded from South Africa.

Orchestia rectipalma K. H. Barnard, 1940

Orchestia rectipalma K. H. Barnard, 1940: 473, fig. 32.

Records: 31/18/E to 34/19/E, a few records.

Distribution: Endemic, Natal to South West Africa, a brack-water species.

Talorchestia australis K. H. Barnard, 1916

Talorchestia australis K. H. Barnard, 1916: 220, pl. 27 (figs 33–34); 1940: 470, fig. 30.

Records: 34/19/I, E to 33/18/I, a few records.

Distribution: Endemic, Moçambique to South West Africa.

Talorchestia capensis (Dana, 1853)

Talorchestia capensis: K. H. Barnard, 1916: 216; 1940: 470, fig. 28.

Records: 29/16/I to 34/19/I, a few records.

Distribution: Mediterranean, Atlantic, South Africa.

Talorchestia quadrispinosa K. H. Barnard, 1916

Orchestoidea fischerii (non Milne-Edwards, 1826): Stebbing, 1910a: 459.

Talorchestia quadrispinosa K. H. Barnard, 1916: 217, pl. 27 (figs 29–32); 1940: 470, fig. 29.

Records: 29/16/I to 34/18/FB/I, the most abundant sandy beach species in this area.

Distribution: Endemic, False Bay to South West Africa.

Family **Temnophliidae** fam. nov.

Diagnosis: Talitroidea with body dorsally depressed, pereon segments produced laterally as pleurae; coxae reduced; mandibular molar nontritriturate; maxilla 1 without palp; palp of maxilliped bi-articulate; uropods 1 and 2 uniramous, uropod 3 without rami; telson entire.

Type-genus: *Temnophlias* K. H. Barnard, 1916.

Remarks: It has long been recognized that the genus *Temnophlias* should be removed from the Phliantidae, into which it was originally placed, since its body shape and reduced mouthparts and uropods are inconsistent with the norm for that family (J. L. Barnard 1969, 1972b). J. L. Barnard (1972b) has suggested the possibility of placing *Temnophlias* in the Eophliantidae; however my feeling is that the depressed body form and entire telson of *Temnophlias* preclude this

possibility and that the genus warrants its own family—the Temnophliidae. The removal of *Temnophlias* enables the diagnosis of Phliantidae to be tightened to read as follows:

Family Phliantidae: Talitroidea with body greatly depressed; pereon segments not laterally extended as pleurae; coxae not reduced; mandibular molar nontritulative; maxilla 1 with or without palp; palp of maxilliped 3 or 4-articulate; uropod 1 biramous, uropod 2 biramous (except *Pereionotus*), uropod 3 uniramous or rami absent; telson entire.

Temnophliidae would thus be distinguished from Phliantidae by the presence of pleurae on the pereon, the reduced maxillipedal palp and uniramous first uropod.

Temnophlias capensis K. H. Barnard, 1916

Fig. 21

Temnophlias capensis K. H. Barnard, 1916: 158, pl. 26 (figs 25–35).

Records: 29/16/I to 34/19/I, fairly common intertidally and in shallow waters.

Distribution: Endemic, Still Bay to South West Africa.

Remarks: This species has been refigured here (Fig. 21) in order to provide a suitable reference for the new family Temnophliidae. Although the lateral margins of the pereon segments are distinctly discontinuous it should be noted that this is not as marked as would appear from K. H. Barnard's (1916) figures. The distinction in body shape between *T. capensis* and *T. hystrix* is not in fact very great—the latter merely having developed strong dorsal carinae and lateral processes on the pereonites and coxae.

Temnophlias hystrix K. H. Barnard, 1954

Temnophlias hystrix K. H. Barnard, 1954: 130, fig. 8.

Records: 30/17/I to 34/18/I, a few records.

Diagnosis: Head with tridentate dorsal process; pereon segments each with a pair of lateral processes, 1 with two medio-dorsal processes, 2–7 with a single medio-dorsal process; coxae 1–4 bifid, 5–7 trifid; pereopods all chelate in both sexes.

Distribution: Endemic, False Bay to Cape Hangklip, usually intertidal.

Suborder CAPRELLIDEA

Family Aeginellidae

Eupariambus fallax K. H. Barnard, 1957

Eupariambus fallax K. H. Barnard, 1957: 9, fig. 6.

Records: 32/17/O, D to 34/18/FB/O, 34/18/D, numerous records.

Distribution: Endemic, Still Bay to Lambert's Bay.

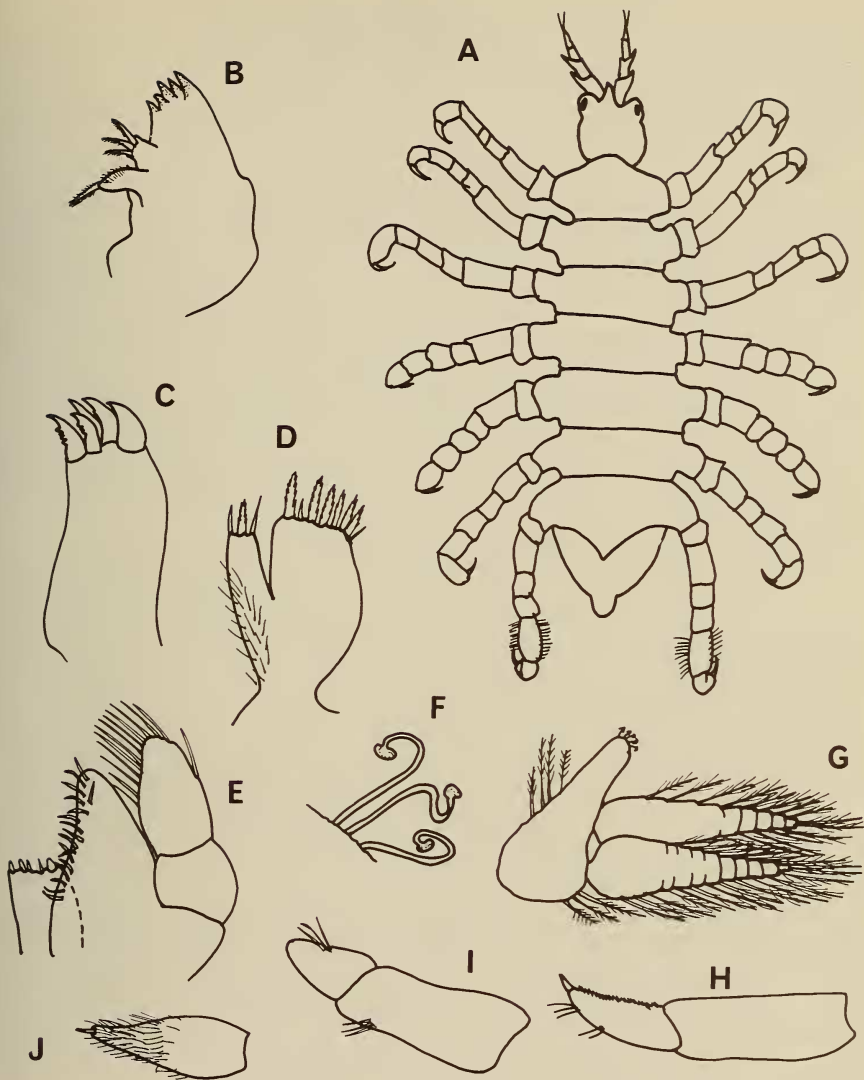


Fig. 21. *Temnophilias capensis* K. H. Barnard, 1916

Female, 7 mm: A—dorsal aspect; B—mandible; C—maxilla 1; D—maxilla 2; E—maxilliped; F—setae of brood lamellae; G—pleopod 3; H, I, J—uropods 1, 2, 3.

Orthoprotella mayeri K. H. Barnard, 1916

Orthoprotella mayeri: K. H. Barnard, 1916: 284; 1925: 372.

Records: 34/18/D, a single record.

Distribution: Indo-Pacific.

Paradeutella serrata Mayer, 1903

Paradeutella serrata Mayer, 1903: 47, pl. 2 (fig. 6), pl. 6 (figs 68–69).

Records: 34/18/FB/I, a single record.

Diagnosis: Head with dorsal spiniform process; pereon segments 1 and 2 also with large medio-dorsal processes, remaining segments with small medio-dorsal humps; antenna 2 about as long as peduncle of 1; article 2 of gnathopod 2 longer than pereon segment 2, bearing an acute distal process, palm poorly defined with three small teeth near finger-hinge, dactyl simple; pereopods 1 and 2 minute, uniarticulate; pereopods 3–5 fully developed; abdomen of ♂ with two pairs of small lobes.

Distribution: Endemic, known only from the above record.

Pseudaeginella tristanensis (Stebbing, 1888)

Pseudaeginella tristanensis: Stephensen, 1949: 52, fig. 23.

Records: 33/18/T, a single record.

Distribution: Tristan da Cunha, South Africa.

Pseudoprotella phasma (Montagu, 1804)

Pseudoprotella phasma: Chevreux & Fage, 1925: 437, fig. 423.

Records: 29/14/D, a single record.

Diagnosis: Head with strong rostral projection; pereon segment 1 with a medio-dorsal process posteriorly, 2 with a pair of processes medially and another posteriorly (large specimens with further spinose processes on pereon segments 3 and 4); lateral spinose processes above insertions of gnathopod 2 and gills; pereopods 1 and 2 of a single minute segment; pereopods 3–5 fully developed; abdomen of ♂ with two pairs of uniarticulate appendages.

Distribution: Mediterranean, eastern Atlantic.

Family Caprellidae

Caprella cicur Mayer, 1903

Caprella cicur Mayer, 1903: 75, 97, pl. 4 (figs 5–7), pl. 8 (figs 3–5).

Records: 32/18/T to 34/18/FB/I, T, O, numerous records.

Distribution: Endemic, Natal to Lambert's Bay.

Caprella danilevski Czerniavski, 1868

Caprella danilevskii: McCain, 1969: 22–25, figs 10–11.

Records: 32/18/T, 33/18/I, 34/18/FB/I, a few records.

Distribution: Widespread, pantropical.

Caprella equilibra Say, 1818

Caprella equilibra: McCain, 1968: 25–30, figs 12–13.

Records: 32/18/T, O to 34/18/FB/T, O, numerous records.

Distribution: Cosmopolitan.

Caprella natalensis Mayer, 1903

Caprella acutifrons var. *natalensis* Mayer, 1903: 81, pl. 3 (figs 22–23).

Caprella natalensis: Laubitz, 1972: 47, pl. 9 (figs F–G), pl. 10 (figs F–K).

Records: 33/18/I, 34/18/T, two records.

Distribution: Pacific North America, Tristan da Cunha, South Africa.

Caprella laevipes Mayer, 1903

Caprella laevipes Mayer, 1903: 108, pl. 5 (fig. 2), pl. 8 (figs 14–16).

Records: 32/18/T to 34/18/FB/T, O, a few records.

Distribution: Endemic, Natal to Lambert's Bay.

Caprella penantis Leach, 1814 *new synonymy*

Caprella falsa Mayer, 1903: 101, pl. 4 (fig. 15).

Caprella penantis: McCain, 1968: 33–40, figs 15–16. Laubitz, 1972: 41, pl. 9 (figs A–E), pl. 10 (figs A–E).

Records: 32/18/T to 34/18/FB/I, T, O, numerous records.

Distribution: Cosmopolitan in tropical and temperate seas.

Remarks: The maintenance of *C. falsa*, created by Mayer (1903) solely on the basis of the inflated article 2 of antenna 1, appears unjustified, since similar variations in the stoutness of antenna 1 are found within other species (e.g. *C. cicur* of Mayer, 1903: pl. 4, figs 6–7).

Caprella scaura Templeton, 1836

Caprella scaura: McCain, 1968: 40–44, figs 17–18.

Records: 29/16/I, 32/18/T to 34/18/T, quite common.

Distribution: Cosmopolitan.

Hemiaegina minuta Mayer, 1890

Hemiaegina minuta: McCain, 1968: 61–64, figs 29–30.

Records: 34/18/FB/T, a single record.

Distribution: Cosmopolitan in tropical and temperate seas.

Family *Cyamidae**Cyamus balaenopterae* K. H. Barnard, 1931

Cyamus balaenopterae: K. H. Barnard, 1932: 309, fig. 171.

Records: Ectoparasitic on Blue and Fin Whales, Saldanha Bay whaling station.

Distribution: Widespread on Fin and Blue Whales.

Cyamus boopis Lutken, 1873

Paracyamus boöpis: K. H. Barnard, 1932: 312.

Cyamus boopis: Margolis, 1955: 124, figs 7-12.

Records: Ectoparasitic on Humpback Whales, Saldanha Bay whaling station.

Distribution: Widespread on Humpback Whales.

Cyamus erraticus Roussel de Vauzème, 1834

Paracyamus erraticus: K. H. Barnard, 1932: 310, fig. 172.

Cyamus erraticus: Margolis, 1955: 132, figs 1-6.

Records: Ectoparasitic on Right Whales, Cape Town and Saldanha Bay whaling stations.

Distribution: Widespread on Right Whales.

Cyamus gracilis Roussel de Vauzème, 1834

Paracyamus gracilis: K. H. Barnard, 1932: 312, fig. 173.

Records: False Bay, ectoparasitic on Right Whale.

Diagnosis: Palp of maxilliped present in juveniles, lost in adult; body parallel sided; head fused to pereon segment 1; pereon segment 2 laterally rounded, branchiae on segments 3 and 4 single, as long as segments 3-5 together, accessory lobes in ♂ double on both segments (in ♀ absent); pereon segments of ♂ without ventral processes, ♀ with a single pair of processes on pereon segment 5.

Distribution: Southern oceans, ectoparasitic on Right Whales.

Cyamus ovalis Roussel de Vauzème, 1834

Cyamus ovalis: K. H. Barnard, 1932: 307, fig. 170.

Records: Cape Town, False Bay, Saldanha Bay, ectoparasitic on Right Whales.

Diagnosis: Maxillipedal palp present in juvenile and adult; body broadly oval; pereon segment 1 distinguished from head by an oblique groove; pereon segment 2 produced postero-distally into a hooked process which engages an anterior process of pereon segment 3; branchiae on segments 3 and 4 each consisting of two equal lobes as long as segments 2-6 together, accessory lobes in ♂ single on segment 3, double on segment 4; ♂ pereon with one pair of ventral processes on each of segments 6 and 7, ♀ with a pair of blunt processes on segment 5 and a pair of tubercles on each of segments 6 and 7.

Distribution: Widespread on Right Whale and North Pacific Whale.

Isocyamus delphini (Guérin-Méneville, 1836)

Isocyamus delphini: K. H. Barnard, 1932: 313–314. Stephensen, 1942: 454–455.

Records: 'From dolphin'—exact location unknown.

Diagnosis: Body ovate, head completely fused to pereon segment 1; gills on pereon segments 3 and 4 short and stout, accessory gills in ♂ single, almost as long as gill, an outward-directed process projecting from base of each gill; ♂ pereon with a pair of ventral tubercles on each of segments 5–7, ♀ with a pair of inward-directed processes on segment 5 and a pair of tubercles on each of segments 6 and 7.

Distribution: Widespread on dolphins, Pilot Dolphins and False Killer Whales.

Remarks: This species has not previously been recorded from southern Africa.

Neocyamus physeteris (Pouchet, 1888)

Paracyamus physeteris: Stephensen, 1942: 453.

Neocyamus physeteris: Margolis, 1955: 131, figs 21–23.

Records: SAM–A12307—station data unknown.

Diagnosis: Body slender with pereon segments 3 and 4 half as wide as 5 and 6; gills short, each divided into about 12 filiform appendages, accessory gills absent.

Distribution: Widespread on Sperm Whales and rarely Ocean Dolphin.

Remarks: This is the first record of this species from southern Africa.

Family Phtisicidae

Caprellina longicollis (Nicolet, 1849)

Caprellina longicollis: McCain, 1969: 289, fig. 2.

Records: 29/16/I to 34/18/I, T, 34/18/FB/I, T, fairly common.

Distribution: Mediterranean, southern oceans.

Caprellina spiniger K. H. Barnard, 1916

Caprellina spiniger K. H. Barnard, 1916: 282, pl. 28 (fig. 35).

Records: 33/18/I, 34/18/FB/I, a few records.

Distribution: Endemic, Mossel Bay to South West Africa.

Phtisica marina Slabber, 1769

Phtisica marina: Chevreux & Fage, 1925: 434, fig. 422. McCain, 1968: 91–97, fig. 46.

Records: 32/18/T, 32/17/D to 34/17/D, 34/18/FB/O, numerous records.

Distribution: Mediterranean, Atlantic, southern Africa.

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